

REGIONAL WORKSHOP
ON
PREVENTION OF DRUG ABUSE

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ORGANISED
BY

T.T. RANGANATHAN CLINICAL RESEARCH FOUNDATION
IV MAIN ROAD, INDIRA NAGAR, MADRAS-600 020

Community Health Cell

Library and Documentation Unit

367, "Srinivasa Nilaya"

Jakkasandra 1st Main,

1st Block, Koramangala,

BANGALORE-560 034.

Phone : 5531518

I - DRUGS

When a substance, (pharmaceutical preparation or naturally occurring) is used to primarily bring about a change in some existing process or state (physiological, psychological or bio-chemical) it can be termed as a drug. In simpler terms, any chemical that alters the physical or mental functioning of an individual is a drug.

Drugs may or may not have medical uses and may or may not be legal. When drugs are used to cure an illness, prevent a disease or improve the health condition, it is termed drug-use.

When drugs are taken for reasons other than medical, in amount, strength, frequency or manner that damages the physical or mental functioning of the individual, it is a drug-abuse. Any type of drug can be abused. Drugs with medical uses can also be abused.

With medically prescribed drugs, a differentiation can be made between drug use and drug-abuse. Medically used drugs can be abused in the following ways:

Too much: Taking an increased dosage without medical advice.
Eg. Taking 10 mg of valium when only 2 mg has been prescribed.

Too often: Taking small doses too frequently. Eg. Taking a quantity during day-time when a bed-time dosage alone has been advised.

Too long: Taking the drug for extended period of time - longer than the prescribed period. Eg. Continued use of the drug for months when the physician has advised usage only for a fortnight.

Wrong use: Taking a drug for reasons other than medical, for which it is intended, or taking a drug without medical advice. Eg. Taking Gardinal (an anti-epileptic drug) for the sedative side-effects it produces.

Wrong combination: Taking a drug in combination with certain other drugs. Example taking barbiturates (depressant drugs) with alcohol to enhance the effect.

Illegal drugs like brown sugar and ganja have no medical use. With these drugs, there is no drug use. To use them is to abuse them. From the very onset of use, it is drug abuse.

Drug abuse leads to drug addiction with the development of tolerance and dependence. Some drugs produce only psychological dependence while others produce both physical and psychological dependence.

When tolerance develops, the user needs more and more of the drug to get the same effect. Smaller quantities which were sufficient previously are no longer effective and the user is forced to step-up the amount of drug-intake.

Psychological dependence is a state characterised by emotional and mental ~~pre-occupation~~ with the effects of the drug and by a persistent craving for it. When psychological dependence develops, the user gets mentally 'hooked on to' (is dependent on) the drug.

When physical dependence develops, the user's body becomes totally dependent on the drug. With prolonged use, the body becomes so used to functioning under the influence of the drug, that it is able to function normally only if the drug is present.

After the user becomes dependent, if intake of drugs is abruptly stopped, withdrawal symptoms appear. In a sense, the body becomes confused and protests against the absence of the drug. The withdrawal symptoms may range from mild discomfort to convulsions, depending on the type of drug abused. The intensity of withdrawal symptoms depends on the type of drug abused, the duration of abuse and amount of drug-intake.

These withdrawal symptoms make giving up drugs very difficult. The user is seemingly caught in a web of his own making. He wants to avoid the unpleasant withdrawal symptoms, and to avoid them he needs the drugs. The addict is thus forced to continue drug use even when he knows that drugs are hurting him.

Addictive drugs are classified in various ways based on the origin, chemical structure, mechanism of action etc. When classified according to their effects on the user, addictive drugs can be classified into FIVE major categories.

The fifth category on Cannabis (Ganja) has been dealt with in another chapter.

NARCOTIC ANALGESICS

In Greek, the prefix 'narco' means to 'deaden' or 'benumb'. Analgesic means pain-killing or pain-relieving. The term 'narcotic' medically refers to opium and opium derivatives or synthetic substitutes that produce opium like effects. All the narcotic analgesics share the common property of benumbing and thus relieving pain. As a class, they are pain killers with a high addictive potential.

Drugs belonging to this category can be studied under three broad categories. Narcotics of natural origin, semi-synthetic narcotics and synthetic narcotics. Semi-synthetic narcotics are sometimes referred to as 'opiates' and the synthetic drugs are known as 'opioids'.

Narcotics of Natural origin:

The poppy plant, 'Papaver Somniferum' is the source of the naturally occurring narcotic drugs. For several thousand years

this plant has been cultivated for its effects. Today, its cultivation has been restricted by law.

1. Opium:

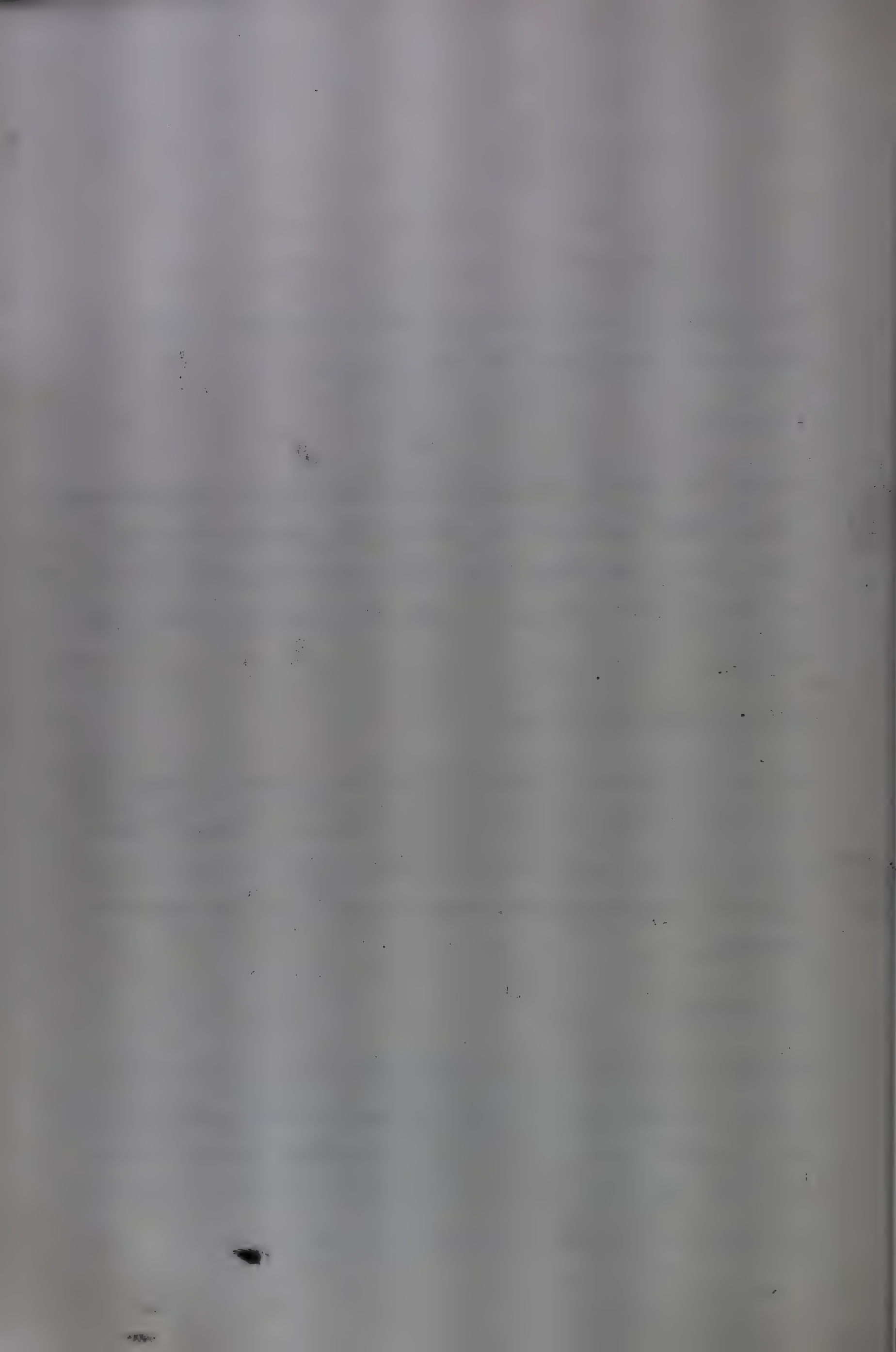
"Opium" is derived from the Greek word 'opion' meaning poppy juice. Small incisions are made on the unripe pod of the poppy plant. The milky fluid that oozes is scraped by hand and air-dried. This dark-greyish tar like substance is called "opium" .

Route of Administration:

Absorption across the mucuous membrane: Opium is mixed with betel nuts etc., and chewed. The drug gets absorbed across the mucuous membranes in the oral cavity. Care is taken to see that the juice is not swallowed for it leads to unpleasant effects.

2. Morphine:

Morphine is the principal alkaloid that is extracted from opium. (An alkaloid is a type of drug which can be extracted from a plant). About 10 - 15% of the opium exudate contain morphine. Morphine is one of the most effective drugs known for the relief of pain and is still used medically.



Route of Administration:

Injected - Subcutaneously, intra muscularly or intravenously.

Most morphine addicts use the intravenous method.

3. Codeine:

Codeine is another alkaloid found in opium though in a smaller percentage than morphine (one to two percent).

Codeine is used in cough-suppressant drugs and anti-diarrhoeal preparations.

Route of Administration:

a) Injected - Codeine is usually injected sub-cutaneously or intra-muscularly.

b) Oral- Medical preparations of codeine are usually made in combination with other chemicals and made available in the form of tablets and syrups.

Codeine is very rarely abused as it's analgesic effects are mild but severe side effects (eg. convulsions) are often experienced.

Semi-synthetic narcotics:

1. Heroin:

Heroin is a semi-synthetic derivative of the drug morphine.

When heroin (diacetyl morphine) was synthesized first,

medical men thought they had an effective pain killer on their hands. When the negative side effects and high addiction producing properties were identified years later, it was banned. Heroin has no medical use whatsoever now.

Pure heroin is a white powder with a bitter taste and is a costly drug by Indian standards. To increase the marketability of the drug, an adulterated variety has come into being. Rodenticides (rat poison), cleaning powder, quinine etc were added to heroin to increase the bulk of the drug. Due to the adulterants added, the drug's colour now varies from light to dark brown. This is referred to as 'brown sugar' or 'smack'. Purity of the 'brown sugar' sold on the streets varies widely. Diluents are mixed with heroin in ratios ranging from 9 to 1 to as much as 99 to 1.

Route of Administration:

- a) Inhalation: Smoked with tobacco in cigarretes or 'chased'.
Chasing- The drug is sprinkled in a silver foil or placed in a bent-spoon and heated from beneath with a candle. The thick fumes which arise are taken in through the mouth with a rolled up piece of paper.
- b) Injection: The drug is dissolved in water and injected sub-cutaneously or intravenously. When injected, 'the rush' (heightened pleasure) experienced is magnified. But heroin does not dissolve completely in water and

and some of it is wasted. So, 'chasing is the commonly used method to take heroin or brown sugar'.

SYNTHETIC NARCOTICS:

Synthetic narcotics are produced entirely within the laboratory. These drugs imitate the effect of the opiates but are not prepared from opium. Pethidine and methadone are the most widely available synthetic narcotic drugs.

Pethidine:

Pethidine is probably the most widely used drug for the relief of moderate to severe pain.

Route of Administration:

Pethidine addicts almost always inject the drug.

Methadone:

Methadone received wide recognition in the area of narcotic addiction treatment from the 1960's in the US. It became part of heroin detoxification and maintenance programmes for heroin addiction treatment. Ironically, methadone later became the major cause of overdose deaths and many got addicted to methadone. Its use has since then declined.

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Route of Administration:

Methadone is almost as effective when administered orally as it is by injection. So methadone is usually taken in the form of tablets.

Short-term effects:

When injected, the effects are immediate and pronounced. With other route of administration the effects are felt more gradually.

The main effects include:

- a short lived state of euphoria in which feelings of hunger and pain are not felt.
- mental clouding - impairment of intellectual processes
- drowsiness, apathy, decreased physical activity
- reduced heart rate and blood pressure, and constipation
- opiates also produce constriction of pupils (with the exception of synthetic narcotics)

A few adverse reactions may also appear:

- nausea, vomiting
- dysphoria (a feeling of unpleasantness)

- increased sensitivity to pain after the initial effect wears off

- itchy skin

With large doses, pupils constrict to pin point size and respiratory depression becomes more pronounced. With an overdose, cyanosis develops in which skin becomes cold, moist and bluish. Convulsions may occur which can be followed by respiratory arrest and death.

Long-term effects:

Severe constipation, contracted pupils and moodiness are some of the long-term effects. Chronic users may develop lung problems due to its effects on the respiratory system. Infection can be caused by unsterile needles. Abscesses (pus formation), cellulitis (inflammation of connective tissues), liver damage, tetanus & brain damage are the other problems which may occur.

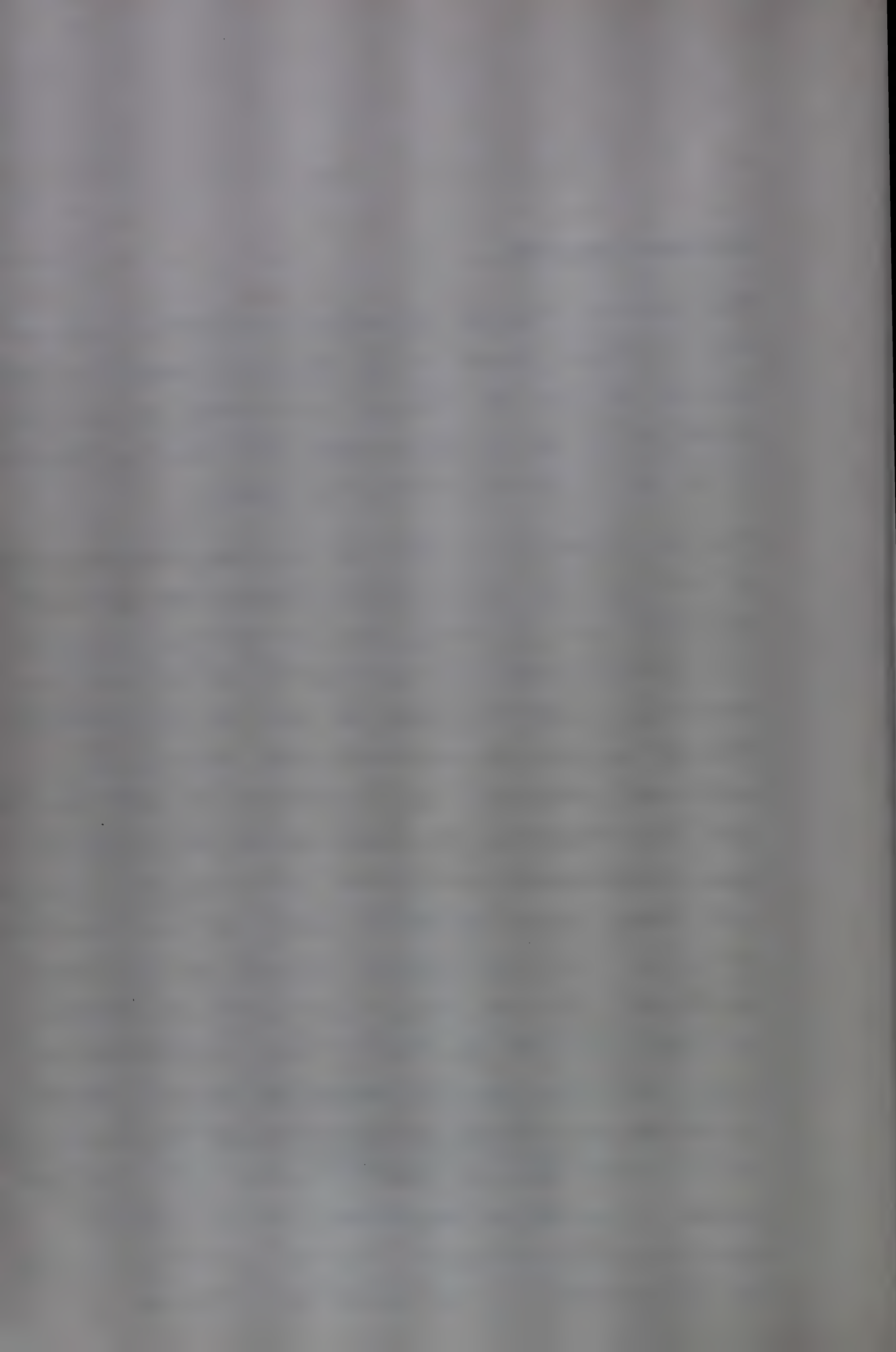
Tolerance and dependence:

Tolerance develops fairly rapidly making higher doses necessary to maintain the intensity of its effects. The narcotic analgesic class of drugs are highly addictive, and regular use results in severe physical and psychological dependence.

Withdrawal symptoms:

The withdrawal symptoms of narcotic analgesics are more painful and severe, compared to the withdrawal symptoms of other category of drugs. The severity of withdrawal symptoms will depend on the type of narcotic used, the amount and duration of use and the general health of the person.

With the deprivation of narcotics, the first withdrawal signs are usually experienced shortly before the time of the next scheduled dose. Complaints, pleas and demands by the addict are prominent, increase in intensity and are at their peak from 36 to 72 hours after the last dose, and then gradually subside. Symptoms such as watering eyes, running nose, yawning and perspiration appear about 8 to 12 hours after the last dose. Thereafter, the addict may fall into a restless sleep. Restlessness, irritability, loss of appetite, insomnia, goose flesh, tremors and finally yawning and severe sneezing also occur. Withdrawal symptoms intensify and reach their peak at 48 to 72 hours. The patient is weak and depressed with nausea and vomiting. Stomach cramps and diarrhoea are common. Heart rate and blood pressure are elevated. Chills alternating with flushing and excessive sweating are also the characteristic symptoms. Excrutiating pain in the bones and muscles of the back and extremities occur as do muscle spasms and kicking movements ('kicking the habit'). At this time an individual may develop suicidal tendencies.



Without treatment the syndrome eventually runs its course and most of the symptoms will disappear in 7 to 10 days. The time taken to restore physiological and psychological equilibrium, however, is unpredictable. For a few weeks following withdrawal, the addict will continue to think and talk about his use of drugs and be particularly susceptible to an urge to use them again.

STIMULANTS

Stimulants are drugs which excite or speed up the nervous system - especially the central nervous system (CNS) and the autonomous nervous system.

The two most prevalent stimulants are nicotine in tobacco products and caffeine, the active ingredient in coffee and tea. These however will not be discussed here. Here the more potent stimulant drugs will be the focus of attention. They include amphetamines and cocaine.

1. Amphetamines:

Amphetamines are synthetic drugs produced entirely within the laboratories. Amphetamine, dextroamphetamine and methamphetamine collectively come under the term amphetamines. The effects produced by these three are the same; however they can be differentiated only by clinical analysis.

Amphetamines are still used medically to treat narcolepsy (an uncontrollable tendency to sleep) and hyperkinetic behaviour in children (excessive activity and short attention span).

Amphetamines are sometimes used in weight control programmes, in the treatment of mild depression and relief from fatigue. Amphetamines are now however recognised as poor choices for treating these disorders.

Amphetamines are white, odorless, crystalline powders with a bitter taste. Illicit varieties include fine or coarse powders, crystals, off-white to yellow in colour, supplied loose or in capsules or tablets.

2. Cocaine:

Cocaine, the potent stimulant of natural origin is extracted from the leaves of the cocoa plant (*Erythroxylon coca*).

Cocaine is particularly useful in eye, nose and throat surgery because of its ability to anesthetize tissues, and simultaneously constricting blood vessels and limit bleeding.

It is an odorless, white crystalline powder with a bitter numbing taste. Street cocaine is often adulterated with other chemicals,

Routes of Administration:

1. Amphetamines:

Oral- Amphetamines are well absorbed orally and are taken in the form of tablets or capsules.

2. Cocaine:

Oral- The leaves of the cocoa plant are sometimes chewed.

snorted- Cocaine is usually 'snorted' or taken in through the nasal passages (like snuff).

Very rarely, cocaine is injected for a heightened effect.

Short-term effects:

Its effect is felt in the central and peripheral nervous system. The main effects include:

- euphoria elation
- sense of super-abundant energy, increased self-confidence
- increased motor and speech activity
- suppression of appetite (which is why it is used in diet pills)

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- increased wakefulness and feelings of fatigue are masked (the reason why amphetamines are abused by students during examination).

Pupillary dilation, dryness of mouth, increased respiration, heart rate and blood pressure, reduced gastrointestinal activity and urinary retention are other effects.

Unpleasant effects such as temporary impotence, anxiety or even panic may be noted.

With large doses, very rapid heart beat, hypertension, headache, profuse sweating, severe agitation and tremors may occur. Very high doses cause rapid, irregular and shallow respiration, convulsions and coma.

Long term effects:

Shorting of cocaine may result in perforation of the nasal septum.

Chronic state of overstimulation, mood swings, chronic sleep problems, poor appetite and impotence are the long term effects of stimulant abuse. Acts of violence, homicide and suicide rates among stimulant abusers are high.

Chronic use may produce 'amphetamine psychosis'. Paranoid ideations, and purposeless stereotypic behaviour may develop.

A full blown amphetamine psychosis which cannot be differentiated from paranoid schizizophrenia may develop.

Tolerance and dependence:

Tolerance does develop to a certain extent. For a long time, it was debated as to whether stimulants produce physical dependence. But now it is clearly known that it does to an extent. As the intensity of the pleasurable effects of cocaine is high, strong psychological dependence also develops.

Withdrawal symptoms:

Extreme fatigue prolonged but disturbed sleep, voracious appetite, moderate to severe depression are the commonly reported withdrawal symptoms.

HALLUCINOGENS

Hallucinogens are drugs which dramatically affect perception, emotions, and mental processes. As they distort the perception of objective reality and produce hallucinations, these are known as 'hallucinogens'. Hallucinogens are also referred to as psychedelic (mind altering) drugs.

Hallucinogens include a wide variety of substances ranging from wholly synthetic products to naturally occurring substances. The most common hallucinogenic drugs are listed below:

1. LSD (Lyseric acid diethylamine): LSD is a semi-synthetic drug and the most powerful hallucinogen. It is produced from lyseric acid, a substance derived from the ergot fungus which grows on rye, or from lyseric acid amide, a chemical found in morning glory seeds.

LSD was used only as a research tool to study the mechanism of mental illness.

LSD is a white, odorless, crystalline material which is soluble in water.

2. PCP (Phencyclidine): was synthesized and tested as a human anaesthetic in the 1950's. It's use was later discontinued due to its side effects like confusion and delirium. It later came to be used as a veterinary medicine. PCP is now produced in clandestine laboratories only.

PCP is commonly called Angel-dust. PCP in its pure form is a white crystalline powder that readily dissolves in water.

Mescaline: is derived from the Mexican peyote cactus and the San Perdo cactus. Consumption of mescaline was part of religious ceremonies for centuries in parts of North America and is still used in these areas. Mescaline can also be produced synthetically, Mescaline appears as a white or coloured powder.

Psilocybin: Psilocybin is chiefly derived from the 'psilocybe' mushroom. The drug can be synthetically produced only with great difficulty. Crude mushroom preparations containing psilocybin are usually sold as dried brown mushrooms.

DMT (dimethyl-triptamine), DOM (4 methyl-2, 5 dimethoxy-amphetamine), MDA (methylenedioxyamphetamine) and belladonna alkaloids also come under the hallucinogen category of drugs.

Routes of Administration:

1. LSD: It is well absorbed orally and is usually taken in the form of tablets. LSD blotter papers are also common. Here LSD is dissolved in water and is absorbed in a blotting paper. A piece of this paper is torn off, placed under the tongue and sucked.

2. PCP: It is snorted, smoked, eaten and rarely used intravenously.

3. Mescaline: Oral route of administration is most common.

4. Psilocybin: This drug is well absorbed orally. The mushroom itself may be eaten or dried, powdered and smoked.

Short term effects:

The physical effects produced and perceptual effects created differ from one drug to another and wide chemical differences also exist.

1. Alterations of mood - usually euphoric but sometimes severely depressive.
2. Distortion of the sense of direction, distance and time (eg. passage of a few minutes may seem like hours).
3. Intensification of sense of vision. Colour and texture of items become more vivid and perception of details is increased.
4. 'Psuedo' hallucinations ('pseudo' because the user knows that the experience is not true. Eg. seeing a myriad of colours or bizarre images).
5. Synesthesia melding of two sensory modalities. (User may feel he can see music, hear colours etc).
6. Feelings of depersonalisation, loss of body image and a loss of sense of reality (user may feel that body is shrinking or becoming weightless etc).
7. Sense of past, present and future may be jumbled. Concentration becomes difficult and attention fluctuates rapidly.
8. Vague ideas and extreme preoccupation with philosophical issues is common. The great truths and insights he believes that he discovers are unintelligible or nonsensical to those not under LSD influence.

Hallucinogens are however unpredictable in their effects each time they are used. Acute panic reactions can also be produced resulting in a 'bad trip'. Acute anxiety, restlessness and sleeplessness are common until the effect of the drug wears off.

Self destructive behaviour and rash decisions and accidents springing from impaired judgement are common.

Long term effects:

1. 'Flash backs' or spontaneous recurrences of an LSD experience can occur without warning for upto a year after LSD use. The exact mechanism of this effect is not known. The user may experience effects such as intensification of colour, apparent movement of a fixed object or other hallucinogenic effects even after abstinence for a few months.

2. A motivational syndrome: The user becomes very apathetic, is very passive and shows no interest in life.

3. LSD precipitated psychosis: Acute panic reactions which can occur may lead the user into a stage of drug-induced psychosis. It may resemble paranoid schizophrenia in many respects with hallucinations (mainly visual), delusional thinking and bizarre behaviour. The psychotic episode ordinarily lasts for several hours or in some cases it may last for several years also.

Tolerance and dependence:

Tolerance develops very quickly and disappears rapidly after discontinuation. Due to rapid development of tolerance, most of the users discontinue use of the drug atleast for a while to regain original sensitivity.

Psychological dependence can develop though the user does not become physically dependent. Particular withdrawal symptoms are not reported.

DEPRESSANTS

Depressants are drugs which depress or slow down the functions of the central nervous system. The drugs which come under this category include:

1. Sedative - hypnotics

2. Alcohol - Has been dealt with in another chapter.

1. Sedative hypnotics:

Barbiturates and benzodiazepines are two main drugs under this category.

Barbiturates: More than 2500 barbiturates have been synthesized and about 50 compounds marketed. These compounds have been researched and developed for their tranquilising and

sleep inducing effects. Some of the more commonly used barbiturates are included in the table below:

Generic Name	Trade Name
Thiopental	Sodium pentothal
Pentobarbital	Nembutal
Secobarbital	Seconal
Phenobarbital	Luminal Gardinal

Salts of barbiturates are white bitter powders.

Barbiturates are medically used to induce sleep, sedation, anesthesia, narcoanalysis (truth-serum), anticonvulsants (anti-seizure eg. phenobarbital).

Benzodiazepines: Over 2000 types of benzodiazepines have been synthesised but only twelve of them are marketed. Benzodiazepines as a class are the most frequently prescribed drugs. The following table lists some of the most commonly prescribed benzodiazepines.

Gen : ale

Generic Name

Trade Name

Diazepam	Valium, Calmpose
Chloriazepoxide	Librium
Flurazepam	Dalmane
Alprazolam	Alprax
Lorazepam	Ativan

The clinical uses of benzodiazepines include anxiety reduction, inducing sleep, pre-anesthesia, muscle relaxation and in control of seizures. Of late however, physicians have been discouraged from prescribing these drugs for anxieties arising out of everyday living. The use of tranquilisers on a daily basis for more than three months is becoming less acceptable.

Benzodiazepines are white or pale yellow crystalline powders.

Drugs like meprobamate (eg. equanil), glutethimide (eg. doriden), chloral hydrate (eg. mickefinn drops) do not fall into any of the two categories mentioned above. But the overall depressant effects produced are similar.

Sedative hypnotics produce effects that are similar to that of alcohol. The main effects include:

- relief from anxiety and tension
- euphoria (usually with barbiturates) _____
- mild release of inhibitions
- sedation, sleep with larger doses
- motor in-coordination (especially for fine motor tasks)
- impaired concentration and judgement
- slurred speech and blurred vision

Nausea, abdominal pain, excitation which may lead to hostile behaviour can also occur.

With large dose, barbiturates can cause irregular breathing, weak pulse, coma and death. Death due to overdosage rarely occurs with other sedative hypnotics. Overdosage deaths usually occur with a combination of sedative hypnotics and alcohol.

Long term use can produce emotional depression, chronic fatigue, respiratory impairments, impaired sexual function, decreased attention span, poor memory and judgement. Chronic sleep problems may develop.

Reduced REM sleep due to drug use makes quality of sleep so poor that the user does not feel rested on awakening.

Tolerance:

Tolerance to the sleep inducing effects develop very rapidly with barbiturates and to the anxiety relieving effects of benzodiazepines.

Cross tolerance to other drugs of the depressant class also develops (i.e the desired effect will not be felt, if user who is tolerant to one of these drugs ingests another at a dose level which would otherwise be sufficient to produce the same effect).

Tolerance diminishes following a short period of abstinence.

Dependence:

Incidence of development of physical dependence with these drugs is low.

The psychological dependence produced is however significant.

Anxiety or even panic is evident if he is temporarily unable to obtain supply of the drug. User experiences a persistent craving for the drug even when significant psycho-active effects are not felt.

Withdrawal:

The withdrawal symptoms after abrupt abstinence is often not as severe as withdrawal from other classes of drugs.

Mild withdrawal symptoms like anxiety, insomnia, weakness and nausea are usually noted.

With very high, chronic use of the drug, agitation, high body temperature, delirium, hallucinations and convulsions develop.

CANNABIS

Cannabis drugs are made from the Indian hemp plant - Cannabis Sativa. This plant has been cultivated for centuries in many parts of the world for the tough fiber of the stem and for its psycho-active properties. When its mind altering properties came to be known, the cultivation of cannabis was banned. Its therapeutic potential and possible medicinal properties were and are being studied. As of now, cannabis drugs have no medical use.

More than 60 constituents, known as cannabinoids, occur naturally in and only in the cannabis plant. The chief psycho-active substance among them is delta-9-tetrahydrocannabinol - referred to commonly as THC. THC is responsible for the effects that the cannabis drugs produce. THC can also be produced synthetically but only at a considerable cost and effort.

The main drugs under this category include:

1. Ganja/Marijuana: Ganja is prepared from the dried leaves and flowering tops of the plant. Ganja is commonly referred to as grass, pot or stuff.

The concentration of THC in ganja varies widely depending on the source and selectivity of plant materials used.

Ganja may range in colour from greyish green to greenish green to greenish brown and in texture from a dry powder to a dry leafy material to a finely divided tea like substance.

Ganja is usually smoked in the form of hand-rolled cigarettes ('joints' or 'refs') or pipes specially made for this purpose. Ganja is usually mixed with tobacco and smoked. The proportion of ganja and tobacco is altered according to the need of the user.

2. Hashish/Charas:

Both male and female forms of the cannabis plant exist. The female plant secretes a sticky resin which has a high THC concentration. The resinous secretion of the cannabis plant, which is collected and dried is known as Hashish/Charas.

The THC content in hashish ranges from 5 - 15%

Hashish sometimes contains the dried compressed flowers also and ranges in colour from light brown to almost black.

Hashish can be smoked and is sometimes baked with food and eaten.

3. Hashish Oil:

Hashish oil is produced by a process of repeated extraction of cannabis plant material to get a high concentration of THC.

It is highly potent with a THC concentration ranging from 20% upto even 60%. A drop or two of this liquid is equivalent to one or more 'joints' of ganja in terms of its psycho-active effect.

Hashish oil is a dark viscous liquid. Hashish oil is usually put on a cigarette and smoked.

4. Bhang is the least potent of all cannabis drugs. Bhang contains the dried parts of the plants - leaves and stem.

Bhang is a brown leafy material with dried twigs etc. Bhang is usually brewed with tea or milk and drunk.

Absorption:

When cannabis drugs are smoked, less than 50% of the THC is absorbed and enters the circulation. The effects are felt within minutes. The effects peak after 10 - 30 minutes and action ceases after 2 - 3 hours.

When eaten or taken in the oral route, the effects are felt after 1 hour and peak is felt only after 4 - 5 hours. Users prefer to smoke the drug, as it is about three times more potent when compared to the oral route of administration.

Distribution:

After intake (through smoking or orally), cannabis drugs are well distributed to all the body organs and concentrate especially

in the fat tissues. It remains in the brain, reproductive organs and fat tissues for long periods of time.

Excretion:

THC rapidly enters the fat tissues from the blood. From here they must pass back to the blood and reach the liver to be metabolised.

THC is metabolised by the liver into more water soluble compounds so that it can be excreted. Some of the metabolites (products of metabolism) which are produced are also psycho-active.

Effects on the user: -

The exact effect that cannabis drugs produce cannot be accurately predicted. The prior experiences and expectation of the user, the potency of the drug etc., are important factors in producing the psycho-active effect. The main effects include:

- mild euphoria followed by a dreamy state of relaxation
- increased auditory and visual activity (eg. sound seems louder and clearer, vision seems brighter and sharper)
- sense of smell, touch and taste are also often enhanced
- lowering of inhibitions, uncontrolled laughter

- altered sense of time perception (time may seem to move very slowly)
- impaired short term memory, reduced attention span and concentration, disturbed thought patterns.
- impairment of ability at complex motor tasks, decreased muscle strength and hand steadiness
- splitting of consciousness is evident. While experiencing the high, the user at the same time is an objective observer to his own intoxication. He may have paranoid thoughts, yet at the same time laugh at them.
- Some users experience a 'bad trip' with adverse reactions like fearfulness, anxiety or even panic as well as mild paranoia. Nausea, vomiting and dizziness may occur.

In addition to the above effects on the central nervous system, the following effects are also noticed:

Cardiovascular:

- Tachycardia (increased heart beat) is very prominent
- Slight drop in body temperature and blood pressure causing dilation of blood vessels. Due to the dilation of the conjunctiva reddening of the eyes can be noticed.

Respiratory:

Irritation of the mucosal membranes lining the respiratory system; bronchodilation.

Gastro intestinal:

Increased appetite, especially for sweets; dryness of the mouth and throat due to decreased salivary flow.

Others:

Suppression of REM sleep, changes in libido.

Stronger doses intensify reactions. The individual may experience shifting sensory images, mood swings, a flight of fragmentary thoughts, an altered sense of self-identity, impaired memory and dulling of attention, despite an illusion of heightened insight. There may be confusion about the past, present and future.

High doses may result in image distortion, loss of personal identity and hallucinations. Very high doses may result in toxic psychosis.

Tolerance:

Frequent and regular users of high doses develop tolerance to the desired effects. To maintain intensity of effects, users

increase their daily dose. Abstinence for several days can restore original sensitivity.

Dependence:

Physical dependence on cannabis develops in high dose users, Psychological dependence develops. User acquires a persistent craving for the drug which consequently takes on a central role in his life. If cannabis is temporarily unavailable, anxiety or even feeling of panic, may ensue.

Withdrawal:

Abrupt cessation of cannabis use, produces withdrawal symptoms - sleep disturbances, sometimes with recurrent nightmares, loss of appetite, irritability, nervousness, anxiety, sweating and upset stomach. Sometimes chills, increased body temperature and tremors develop. Withdrawal symptoms usually lasts for less than a week.

Complications:

- Pronounced psychological problems are particularly high among users with emotional problems who turn to cannabis for relief from psychological stress. They may come to depend inappropriately on cannabis instead of learning drug-free means of coping with stress.

- A motivational syndrome: The user may lose all interest in his work, family etc. He may become so apathetic that he may not even respond if his name is called out.
- Psychosis: A typical psychotic episode characterised by confusion, delusion, hallucination, disorientation and paranoid symptoms may develop.
- Bronchitis: Frequent long term cannabis use may produce bronchitis, asthma, sinusitis, or chronic redness of the eyes because of its irritant effect.
- Sterility: There is evidence to indicate that prolonged use can cause abnormal sperms, reduced sperm-count and decreased sperm motility.

On going studies have turned in some evidence to show that cannabis use reduces the immunity by impairing a component of the white blood cell defense system. It is also speculated that smoke from cannabis, increases risk of cancer.

II - BROWN SUGAR

Heroin belongs to the category of narcotic analgesics. Pure heroin (diacetyl morphine) is a white crystalline powder. The adulterated form of heroin is brown sugar. Brown sugar is otherwise known as 'smack' or 'sugar'. Rat poison, quinine, maltose etc. are the adulterants usually added.

Routes of administration:

Brown sugar is usually chased (inhaling the fumes from heating the drug on a silver foil).

Brown sugar is sometimes smoked in the form of cigarettes.

It is rarely snorted.

Heroin dependents sometimes, inject the drug.

Brown sugar is generally not taken orally. Narcotic Analgesics being alkaline in nature, are not absorbed in the acidic medium of the stomach. In the intestine, the heroin molecules quickly conjugate (attach) to other molecules, making absorption difficult. The little that gets absorbed must pass through the liver before getting into the blood stream. Liver quickly destroys the drug thereby drastically reducing its potency. It is estimated that about 90% of the effect is lost when taken orally.

Distribution:

Brown sugar is not evenly absorbed by all the parts of the body. It concentrates in the tissues especially in the kidneys, liver, skeletal muscle, lungs and spleen. Only small amounts of narcotic analgesics cross the blood brain barrier *(BBB) but the central nervous system is so sensitive that even minute amounts are sufficient to cause a pharmacologic effect.

Small quantities of the drug cross the placental barrier, and fetal dependency can develop.

Excretion:

Excretion of narcotic analgesics is largely through the urine after metabolism to water soluble metabolites (products formed due to chemical reaction in the body). A little amount passes through lungs and bile.

Pharmacology:

There are specific receptor sites on cell membranes in the brain and other places in the body. In our body we have endorphins and enkephalins which are involved in the regulation of pain perception and the emotional response to it.

* The brain is surrounded by several membranes and blood vessels which supply blood to the brain. These form a barrier around the brain which is selective as to what can cross over into the brain tissue from the main blood circulation. This is called the blood brain barrier.

Narcotic drugs bind with enkephalin receptors in the body and produce the same effect. When high doses of narcotics are taken, the normal body production of enkaphalin and endorphin is decreased. When narcotic administration is stopped, the body goes through a period of re-adjustment until the body's own enkephalin production returns to normal - this is the withdrawal period.

Effect

Analgesia, drowsiness, mood changes and mental clouding follows ingestion of even small quantity of morphine (5 - 10 mg).

Other manifestations are a feeling of warmth, heaviness of extremities and dry mouth. Face becomes flushed due to the release of histamine. Among the intravenous users and immediate high (rush), described as akin to an orgasm, is reported. This is followed by sedation (nodding off).

The analgesic effects peak about 20 minutes after intravenous injection or 1 hour after sub-cutaneous injection and last for about 4 - 6 hours. Euphoria may last for 10 - 30 minutes.

Brown Sugar has the same effect as morphine but it is felt much faster as it reaches the brain more quickly.

Other physical signs and symptoms include constipation, muscular impairment, tremors of the tongue, face and hands,

and pin point pupils (Pupils are maximally constricted so that they cannot constrict any further in response to light). As the dependence increases, a general deterioration of health occurs progressively. The victim becomes dull, apathetic, anaemic, haggard and cachectic (malnourished), losing interest in himself and his environment. His intellectual faculties are impaired, and his sense of moral values warped.

SYSTEM EFFECTS:

CNS (Central Nervous System) Effects:

- Euphoria
- Analgesia
- Drowsy, dreamy, mild dozing state
- Apathy, decreased physical activity, inability to concentrate
- Pin-point pupils, droopy eye-lids, reduced visual acuity
- Vomiting in novice users due to stimulation of the chemotrigger receptor zone in the brain (area in the brain which controls vomiting or the vomiting centre)
- Excitation - in high doses it may even cause convulsions

- Decrease in REM sleep (rapid eye movement - the rapid, jerky movements of the eye which occur during certain stages of sleep cycle when dreams occur). REM stage of the sleep cycle is most beneficial to the body as the body is most relaxed at that time. Brown sugar causes drowsiness but decreases sleep time and decreases REM sleep.

Respiratory system:

- Depression of respiration due to the effect on the respiratory centre in the brain stem.

Cardio Vascular system:

- Bradycardia or decrease in the heart rate.
- Dilation of peripheral blood vessels, which is the cause of flushing.
- Hypotension or low blood pressure

Gastro Intestinal tract:

- Constipation (due to decreased movement of the gastrointestinal tract) and poor appetite.

Kidneys:

- Mild decrease in urine formation due to increased secretion of the ADH (anti diuretic) hormone.

Adverse reaction:

When an individual takes brown sugar, he does not always have a pleasurable experience (good trip). Adverse reactions (bad trip) can also occur. These symptoms include the following:

- Nausea, vomiting,
- Mental clouding, dizziness
- Dysphoria or a feeling of unpleasantness
- Severe constipation
- Allergic reactions (manifested as hives which can appear at or near the injection sites due to release of histamine in the body).

Tolerance:

Increasingly higher doses are required to produce satisfactory analgesic, sedative and euphoric effects. Tolerance also develops due to its respiratory-depressant and nausea inducing effects. However, tolerance does not develop to the pupillary constricting or constipating effects.

As tolerance develops with chronic use, and the user gradually increases the dose to achieve the desired effect, a dose plateau is reached where no amount of the drug is sufficient to produce the intensity of effects desired. The user however,

continues the use of the drug to delay withdrawal symptoms.

Dependence:

Powerful physical and psychological dependence develops with brown sugar abuse. Abrupt cessation of the drug use leads to withdrawal symptoms.

Withdrawal symptoms:

The severity of withdrawal symptoms will depend on a number of factors like the duration of drug abuse, typical daily dosage, and the general health condition of the person.

Withdrawal symptoms appear between 8 and 12 hours after the last dose. Symptoms include:

Excessive lacrimation (watering of eyes), coryza with rhinorrhoea (running nose), yawning, sweating, and increased salivation. This stage is followed by an agitated sleep referred to as the 'YEN' sleep which may last for several hours. Upon wakening, agitation accompanied by depression continues. Loss of appetite, dilated pupils, tremors, piloerction (goose flesh which forms the basis of the expression "cold turkey") are the other symptoms.

Withdrawal symptoms peak between 36 and 72 hours. Usually there are alternations between bouts of chills and shivering and bouts of flushing and excessive sweating. Goose flesh

is highly prominent. Uncontrollable yawning, vomiting, nausea, diarrhoea, abdominal cramps, pain in the bone and muscles, muscle spasms and uncontrollable kicking movements (which gave rise to the term 'kicking the habit'), are also experienced.

Increased irritability, restlessness, severe agitation, insomnia & emotional depression can be noted. Generalised hyperaesthesia (increased sensitivity to touch of tactile stimuli), paraesthesia (distorted perception of tactile stimuli), neuralgic pains (excruciating pains in extremities), clouded consciousness and delirium can also occur.

Cardiovascular instability giving rise to hypertension and tachycardia (increased heart rate), increased blood pressure, and general weakness are also noted.

Long after the observable physical symptoms of withdrawal disappear, psychological craving for the drug persists. Chronic depression, and period of agitation may last for extended intervals of time.

Complications:

1. Serum hepatitis which is caused by use of infected needles.
2. AIDS (acquired immunodeficiency syndrome) may occur due to use of infected needles or sharing of needles.
3. Perforation of nasal septum if the route of administration has been snorting

4. Respiratory depression in people who already have respiratory problems
5. Fetal addiction can develop. 80% babies born to addicted mothers show an addiction to narcotics and withdrawal symptoms such as hyper activity, irritability, tremors, regurgitation, poor feeding and diarrhoea. Convulsions too may occur. They have low birth weights.
6. Complications arising due to the presence of adulterants like rat poison, quinine, etc in brown sugar.
7. Intoxication and overdose which leads to coma, bradycardia, respiratory depression and death.

III - ALCOHOL

What is ALCOHOL?

The word 'Alcohol' is derived from the Arabian term, 'al-kuhul' which means 'finely divided spirit'. There are many types of alcohol - amyl, butyl, isopropyl, isobutyl, methyl, ethyl alcohol, etc. Most of these alcohols have various industrial and chemical uses.

Ethyl alcohol (Ethanol) is what is commonly consumed. Ethanol will be referred to here as alcohol.

Alcohol is a clear, thin, highly volatile liquid, with a harsh burning taste.

FERMENTATION:

Alcohol is the product of a natural process called fermentation. If the juice of certain fruits or vegetables is exposed to the air, this process will begin. A microscopic plant called yeast floats freely and reacts with the sugar in the juice. This reaction produces alcohol and releases carbon-di-oxide in the air.

DISTILLATION:

To make beverages with higher alcohol content, a process called distillation is used. Distillation is the heating of a liquid until it turns into a vapour and then condensing it

into a liquid again. When wine or beer is heated in a 'still' (vessel used for distillation) to 173°F, the alcohol boils off as a vapour, and water and most of the other ingredients of the wine or beer remain in the still. This vapour is then cooled. It becomes a liquid which is almost pure alcohol. The distillation process is used to make alcoholic beverages that contain 40 - 60% alcohol. They are called distilled spirit (eg. Whisky, Gin, Rum etc).

Colouring, flavouring and other constituents, called congeners are added during its commercial preparation.

The alcohol content and source of some alcoholic beverages is given below:

Name of the beverage	Source	Approximate Percentage of alcohol
Brandy	Distilled Wine	40 - 50%
Whisky	Cereals	40 - 55%
Rum	Sugar Cane (Mollasses)	40 - 55%
Wines (Port, Sherry, Champagne, etc)	Grapes	10 - 22%
Beer	Cereals (Barley)	6 - 8%
Toddy	Palm juice	5 - 10%
Arrack	Mollasses	50 - 60%

Before proceeding further, let us understand what 'ONE DRINK' implies.

One Drink or 10 Gms. of Alcohol

Whisky, Brandy Rum	Wine	Toddy, Beer
30 ml (1 oz.)	60 ml (2 oz.)	285 ml (10 oz.)

FACTORS INFLUENCING THE EFFECTS OF ALCOHOL:

The effects of alcohol are directly related to its concentration - BAC.

Alcohol acts directly on the brain and alters its working ability. The effects depend on the speed at which the person drinks, his weight, presence of food in the stomach and the type of beverage taken.

Here are a few factors.

SPEED OF DRINKING:

The more rapidly an alcoholic beverage is taken, the higher will be the blood alcohol concentration (BAC).

BODY WEIGHT OF THE DRINKER:

The greater the weight, the lower will be his BAC. For instance, a person weighing 80 kilos will not feel the effects of one glass of whisky as much as a person weighing 50 kilos.

PRESENCE OF FOOD IN THE STOMACH:

Food in the stomach slows down the rate of absorption. A drink after eating a meal will have lesser effect than if it is taken on an empty stomach.

TYPE OF ALCOHOLIC BEVERAGE:

The basic ingredient in all major alcoholic beverages is Ethyl Alcohol. Some beverages have more alcohol in them than others. For example beer has 6 - 8% alcohol whereas distilled spirits have 40 - 60%. A person consuming a beverage with a higher alcohol content, will experience its effects much more than a person taking a drink with a lower alcohol content.

PATH OF ALCOHOL IN THE BODY:

What happens in reality when we drink alcohol?

How does the body deal with it?

Alcohol is one of the few things that is absorbed as soon as it enters the stomach.

Its molecules are small and its chemical pattern simple enough to be used for fuel almost immediately after swallowing.

Unlike other food, alcohol does not need digestion. After ingestion, it is carried to the stomach and small intestines.

It immediately gets across through the wall of the stomach and small intestines into the blood stream, from where it is carried to almost all the organs. As already stated, the rate of absorption is not constant, but depends on various factors like the speed of drinking, type of alcoholic beverage taken, the amount of food stuff in the stomach, etc. In the liver, alcohol undergoes a process of oxidation whereby it is changed into carbon-dioxide and water, and finally energy is released.

METABOLISM:

The way alcohol is used and disposed of by the body, consists of four phases - absorption, distribution, oxidation and elimination.

Absorption:

This takes place in the stomach and small intestines. It is a process whereby the thinnest of blood vessels called capillaries found in the walls of the stomach and small intestines pick up alcohol as soon as it enters and transport it to all parts of the body.

Distribution:

This is the process by which alcohol travels in the blood to each organ, tissue and cell. By simple diffusion, alcohol leaves the blood stream and enters the cells. Alcohol then begins to affect various organs including the brain.

Oxidation:

Once absorbed into the blood stream and distributed throughout the body, alcohol undergoes the process of oxidation. The liver plays a major role in the break down or oxidation of alcohol. Alcohol is oxidised by the liver at the rate of 8 - 15 ml per hour. The oxidation process is brought about by the enzymes produced by the liver. Alcohol is first changed into Acetaldehyde, which in turn is converted to Acetate by the enzyme Aldehydehydrogenase. As a result of this process of oxidation, alcohol is changed into carbon-di-oxide, water and energy.

The energy yield of alcohol-oxidation is about seven kilo calories per gram of alcohol.

There is a mistaken notion that exercise, fresh air, cold shower, hot bath or black coffee will help in making a person sober. This is not true at all. The fact remains that these methods have no effect on the oxidation rate.

All that one can do is to wait, and let the liver do its work.

Elimination:

After oxidation, these chemicals re-enter the blood stream and move on to the kidneys. The kidneys filter out the end product of the oxidation process. They are finally excreted out of the body. 95-98% of alcohol consumed undergoes the above stated changes, while the remaining 2-5% escapes unchanged through sweat, breath and urine.

Ethyl alcohol (C_2H_5OH), the intoxicating substance in alcoholic beverages is considered as a food that supplies empty calories-calories without any nutritive value whatsoever.

From the medical and psychological point of view, it is a depressant, an anti-septic, anesthetic and a hypnotic agent.

Alcohol is a dependency - producing, habit forming & highly addictive drug.

Alcohol is a DRUG:

A drug is any substance (other than food) that produces changes in the physical or mental functioning of an individual. These changes can be acute or insidious, immediate or long term.

Ethyl alcohol (C_2H_5OH), the intoxicating substance in alcoholic beverages, produces physical and psychological changes. Therefore, alcohol is considered to be a drug. In the case of

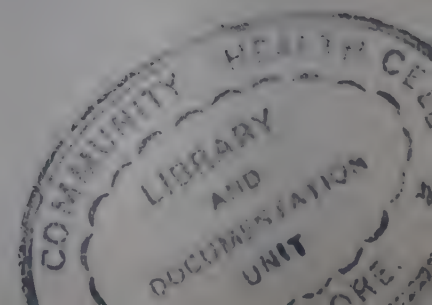
alcohol, these effects range from a feeling of well being experienced after one or two drinks, to drunkenness, which is the acute effect of taking too many drinks.

Alcohol is a DEPRESSANT:

Alcohol is often misunderstood as a stimulant because it appears to make people more lively and less inhibited. It is actually a depressant. If taken in small quantities, it depresses that part of the brain which controls inhibitions, and so the person feels relaxed. When blood alcohol level is low, the drinker experiences a feeling of relaxation, tranquility and a sense of well being. It slightly increases the heart rate, dilates blood vessels, stimulates appetite and moderately lowers blood pressure. When BAL is high, it depresses the other area of the central nervous system, and this results in severe problems.

SHORT-TERM EFFECTS:

These effects appear rapidly even after small or large doses and disappear within a few hours or days. Alcohol affects the brain and nerve cells, which in turn affect human behaviour. The brain is highly sensitive even to very low alcohol concentrations. The disturbances which result, are shown in the activities of the organs controlled by the brain.



The characteristic of alcohol is that not all the nerve cells in the brain are affected by the same BAC. Some nerve centres are more resistant than others, and are not affected by the low BAC. For example, the first to be affected are the centres controlling the higher functions that have been learnt. These include inhibitions and judgement. It is always important to remember that the degree to which people are affected is not always reflected in their behaviour. Because people react differently to alcohol, there is no way of telling by outward behaviour as to how much of alcohol a person has consumed. It can only be approximately generalised.

The most predominant short-term effect of alcohol is that it temporarily removes normal inhibitions.

It also acts as a psychic anaesthetiser, temporarily erasing painful feelings of anxiety, worry, tension, hopelessness and anger.

If larger doses are ingested in a short span of time, a state of social and physical incompetence, known as drunkenness or intoxication ensues.

The following table gives the approximate BACs achieved after consumption of alcohol by a person whose approximate weight is 70 Kg. ONE DRINK in this table equals 1 glass of whisky (30 ml).

BACs mgms%		
<u>No. of drinks</u>	<u>After 1 hour</u>	<u>After 2 hours</u>
1	20	0
2	40	10
3	60	30
4	80	60
5	100	80
6	120	100
7	140	120
8	160	150
9	180	170
10	210	190

Given below are the variable BACs and their approximate effects. These effects occur when a person has consumed alcohol over a short period of time (1 to 2 hours).

BAC mgms%	Approximate Effects
20 mgms%	Feeling of relaxation and an enhanced sense of well being.
40 mgms%	Feeling of well being and garrulousness.
60 mgms%	Impairment of judgement and foresight.

BAC mgms%

Approximate Effects

	Decision making capabilities get affected.
80 mgms%	Lack of motor co-ordination.
100 mgms%	Drunkenness becomes obvious.
	Evident deterioration in physical and social control and competence.
140 mgms%	Staggering and double vision. If this level is rapidly reached, vomiting can occur.
300 mgms%	Loss of consciousness; but still the drinker can be aroused.
450 - 500 mgms%	Breathing stops and death ensues.

LONG-TERM EFFECTS:

When alcohol is repeatedly taken in a large doses over a long period of time, it proves disastrous. It impairs both the length and quality of life.

Excessive intake of alcohol over a long period of time leads to severe physical damages like gastritis, ulcer, cardiomyopathy, polyneuritis, cirrhosis, pancreatitis, etc. This is because the vital organs of the body like the heart, liver and brain are affected.

As a person continues to drink excessively, his tolerance for alcohol increases. That is, he is required to take more and more of it, to experience the same effect.

Prolonged regular intake of alcohol in large doses can create tissue resistance. The body's nerve centres in an attempt to keep the body function in a balanced manner, try to compensate for the depressant effect of the drug. The more they compensate, the more alcohol is required to be taken to obtain the same degree of effect. However, such tissue tolerance is developed only after prolonged drinking regularly in more than normal amounts. The moderate drinker does not develop this tolerance to any significant degree.

The consistently heavy drinker becomes physically and psychologically dependent on alcohol over a long period of time.

PHYSICAL DEPENDENCE occurs when body tissues have adapted themselves to alcohol and require its presence in the system in order to function normally. Their body becomes so much accustomed to the presence of alcohol, that as soon as its intake is abruptly stopped, withdrawal symptoms appear. These symptoms range from sleep disturbances, mild tremors, hallucinations and convulsions, to delirium tremens and death.

Excessive use of alcohol over a long period of time leads to psychological dependence.

PSYCHOLOGICAL DEPENDENCE is that state wherein alcohol becomes so central to a person's thoughts, feelings and actions (morbid preoccupation) that it is almost impossible for him to stop using it.

This form of dependence refers to a craving for the psychological effects. For those who have developed psychological dependence, even a temporary non-availability of alcohol tends to produce anxiety and feelings of panic.

We have seen that Ethyl Alcohol is a dependency producing, highly addictive drug. It is a depressant of the Central Nervous System. It is a product of fermentation and distillation, which when consumed, releases only 'empty calories' with absolutely no nutritive value.

EFFECTS OF REGULAR EXCESSIVE USE OF ALCOHOL

When a person drinks alcohol, it passes through the walls of the stomach and intestines directly into the blood stream. It mixes with the blood and circulates throughout the body. It enters the brain, liver, pancreas etc.

What happens when a person takes large quantities of alcohol on a regular basis?

In this chapter, let us see the damages caused by alcohol in each system inside our body.



System affected	Symptoms as felt by the drinker	Problems observed by others	Name of the disease
Gastro-Intestinal System (stomach intestines)	Heart burn, Pain in the stomach. Nausea. Irritation in the mouth, throat and food canal. Vomiting blood. Blood in stools.	Unable to eat properly. Sudden weight loss or gain. Vomiting blood in the mornings.	Gastritis Ulcer Cancer
Brain and Spinal Cord (central nervous system)	Tingling feelings and numbness of feet, followed by acute pin pricks. Fatigue. Impaired memory. Lack of concentration. Pain in the calf muscles Change in gaze. Blurred vision. Change in gait. (without alcohol) Loss of memory. Speech disturbances.	Swelling in legs. Change in gait Incoordination. Strange movement of eyeballs. Gait and speech disturbances. Loss of memory. Having unshakable wrong notions (Confabulation)	Poly-neuritis Wernicke's Syndrome. Korsakoff's psychosis.
Liver	Acute stomach ache, Vomiting blood. Loss of appetite. Vomiting sensation. Blood in stools	Acute stomach ache. Vomiting blood. Loss of appetite. Poor eating. Yellowness in face, eyes etc.	Fatty liver Jaundice (Alcoholic Hepatitis)

System affected	Symptoms as felt by the drinker	Problems observed by others	Name of the disease
Liver (contd)	Loss of appetite. Acute stomach ache. Swollen feet. Bleeding through the nose/gums, etc. Vomiting blood.	Poor eating. Bulging stomach. Swollen feet. Vomiting blood. Yellowness of face, eyes etc (Jaundice)	Cirrhosis.
Pancreas	Loss of appetite. Pain in the back. Fever. Fatigue.	Loss of weight. Fatigue.	Acute pancreatitis.
	Frequent urination. Excessive thirst.	Drinking lot of water.	Chronic pancreatitis. Diabetes.
Cardio-Vascular System	Chest pain. Palpitation. Breathlessness.	Breathlessness.	Cardio-myopathy.
Respiratory System	Sudden increase and decrease in the rate of respiration		Cancer of the lungs. (This may even lead to death)
Skin	Dryness of skin. Itching.	Dryness of skin. Itching.	Dermatitis

Deficiency of the particular nutrient
--

Name of the disease

Symptoms

Vitamin A

Xerophthalmia

Night-blindness

Vitamin B 1

Alcoholic beri-beri

Heaviness of legs. Swelling of feet. Tingling feeling and numbness of feet. Loss of appetite. Tiredness. Cardiac problems leading to brea- thlessness.

Vitamin B 3

Dermatitis
Diarrhoea
Dementia

Irritation in the skin. Loose motion.

Vitamin C

Lack of resistance to infections.

Minerals

Magnesium deficiency.
Zinc deficiency.

Tremors. Fits. Loss of sense of taste. Slowness in hea- ling of wounds.
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IV - ADDICTION - A DISEASE

The common man sees 'alcoholism' as a weakness of character. The moralist looks at it as a vice. Law finds the consequential acts of alcoholism as a crime. The clergyman considers it a sin.

After extensive research, in the year, 1956, American Medical Association came to the conclusion that it is a DISEASE.

Before elaborating on the disease concept of alcoholism, let us clearly understand who an alcoholic is, and in what respects he is different from the social drinker.

Who is a 'social drinker'?

A social drinker is one who drinks the way his social group permits. He never oversteps their unwritten, unspoken, but clearly understood boundaries. He either drinks occasionally, or drinks regularly in moderate quantities. His intake of alcohol does not cause any problem whatsoever in his life.

Who is an 'alcoholic'?

"An alcoholic is one whose drinking causes continuing problems in one or more areas of his life (family-relationship,

* In this chapter, we will be using the terms alcohol or alcoholic but the process of the illness can be very well applied to any other chemical dependency

financial position, occupation, etc)" - MARTY MANN. In spite of these problems, he will keep on drinking. Here, 'continuing' is the key word. This is what differentiates him from a social drinker.

An 'alcoholic' will not be able to take note of his problems and stop drinking totally. He tries, but never succeeds on a long term basis. He will have no control over his drinking, and even if he stops drinking for a short duration, he will definitely go back to obsessive drinking.

Out of the ten people who start drinking for the pleasure associated with it, two unfortunately become alcoholics. The cause is still not known.

Why is alcoholism classified a disease?

Clinically, a disease is confirmed if the following are present:

- a) The aetiological agent (that which causes the disease)
- b) i) How the agent comes into contact with the patient
(Epidemiology)
ii) What happens when the contact is made (Pathogenesis)
- c) The lesion - the focus of damage and its consequences -
(structural, biochemical, physiological and behavioural)

- d) The syndrome. (A collection of symptoms as complained by the patient and 'signs' observable to others) that regularly occur together)

In 'Alcoholism', the

- a) Aetiological agent is Ethyl Alcohol or Ethanol.
- b) i) Epidemiology - a clearly seen, but complex process.
ii) Pathogenesis - numerous effects in the body
- c) The lesion - quite clear cut in the liver.
- d) Syndrome - well defined and stereotyped reaction (as we are going to see in this chapter).

Now we realise that the person with alcoholism, is a sick person, - a person with a disease.

What is alcoholism?

The most widely accepted definition of alcoholism, is the one offered by Keller and Efron: "Alcoholism is a chronic illness, psychic, somatic or psychosomatic, which manifests itself as a disorder of behaviour. It is characterised by the repeated drinking of alcoholic beverages, to an extent that exceeds customary, dietary use or compliance with the social customs of the community and that interferes with the drinker's health or the social or economic functioning".

Alcohol dependence can be both physical and psychological.

Physical dependence is a state wherein the body has adapted itself to the presence of alcohol. If its use is suddenly stopped, withdrawal symptoms occur. These symptoms range from sleep disturbances, nervousness, and tremors to convulsions, hallucinations, disorientation, delirium tremens (DTs) and possibly death.

Psychological dependence exists when alcohol becomes so central to a person's thought, emotions and activities, that it becomes practically impossible to stop taking it. The ethos of this condition, is a compelling need or craving for alcohol.

The characteristics of alcoholism are as follows:

It is a Primary disease:

Initially, alcoholism was considered a symptom of some psychological disorder. Now it has been understood that alcoholism per se is a disease which causes mental, emotional and physical problems. These associated problems cannot be effectively dealt with, unless alcoholism is treated first.

It is a progressive disease:

If it is not treated, the disease progresses from bad to worse. Sometimes there may be intermittant periods where one

feels there is improvement; but over a period of time the course of the disease will only be towards deterioration.

It will be a terminal disease, if not treated:

A person drinking excessively, may die due to some medical complication like cirrhosis or pancreatitis. But on close scrutiny, it will be found out that the complication itself was induced by alcohol. Thus alcohol is the real agent behind his death.

It is a treatable disease:

The disease cannot be cured; but can be successfully arrested with the help of timely, appropriate, comprehensive treatment. Treatment recommends total abstinence from alcohol. Ingestion of even a very small amount of alcohol will lead the person to obsessive drinking within a few days, as he will lose control. In other words, an alcoholic can never go back to social drinking, even if he has remained sober for quite a number of years. Hence alcoholism is considered a permanent disease.

There are three distinctly noticeable stages in the disease of alcoholism.

EARLY PHASE

Increased Tolerance:

'Physical tolerance' is the body's ability to overcome the usual effect of a drug, so that an increased dosage is needed to experience the same effect as before.

The first warning sign for many who later develop alcoholism, is a need for higher amounts of alcohol to produce 'the desired effect'.

For instance, initially he may have taken a peg or two of whisky to experience a 'warm-glow' - that relaxed and pleasant feeling. For him, now, it takes four to five pegs to experience the same effect.

As tolerance for alcohol increases, the individual also starts gulping his first few drinks, so that the desired effect is felt immediately.

Black-out:

This is a period of temporary amnesia which occurs during the drinking days. 'Black out' should not be confused with 'passing out' which means unconsciousness. During a 'black-out', the person may go through many activities, without being able to recall even a trace of them later on.

During a black-out, the person walks, talks, even drives "apparently normally"; but has no recollection of it afterwards.

People who are not alcoholics, may also occasionally have black-outs. However, in case of people progressing towards alcoholism, repeated episodes of black-out occur.

35 year old Rakesh hails from an orthodox religious family. He had been drinking for over ten years. His drinking however, gradually became excessive. He always arrived home late, totally drunk.

One day, as usual, Rakesh came home in an intoxicated state. He complained that the food was not to his liking; he shouted at his wife; got up aggressively and smashed all the pictures in the pooja room, and then fell asleep.

Next morning, when Rakesh woke up, he was surprised to see his mother and wife sitting in a corner. Nobody spoke to him.

Rakesh asked his mother,

"What happened? How is it that you are not busy with the usual pooja?".

His wife got angry and went away without speaking a single word. His mother narrated what he had done the previous night.

Rakesh was taken aback.

He was totally shaken; for he did not remember anything - not even a trace of it.

Pre-occupation with drinking:

Even when the alcoholic is not drinking, he is always pre-occupied with thoughts of how, when and where he could get the next drink. While at work, he may be thinking about and waiting to get his drinks at noon during lunch break. When going to a party, he some how finds out if there will be alcohol. Drinking is synonymous with having a good time. If drinking is not going to be part of any activity, his response will be, "Count me out".

Avoiding any talk about alcohol:

This is a result of his feelings of guilt. He had been formerly boasting about how much he could drink; but now does not want to talk about it at all. If someone else brings up the subject, he totally diverts the topic, for fear they will talk about his drinking. He does not want to talk about, listen to, or even read anything which has reference to drinking.

MIDDLE PHASE SYMPTOMS

Loss of control:

Initially, there is loss of control over the quantity of alcohol consumed. That is, the person is not able to predict what will happen after the first drink. Intending to have one or two pegs on his way back home from the office, he enters a bar; but he is still drinking till the closing time.

As alcoholism progresses, the patient will lose control over the time and place of drinking (comes drunk early in the morning to the office).

He now reaches a point when he literally cannot keep away from drinking, or control the amount consumed. Drinking becomes compulsive. Now he is totally powerless over

alcohol. Loss of control is a clear-cut sign that alcoholism has now developed. The warning signs are gone. It may get worse; but he is not likely to get better without help.

Satish had been drinking alcohol for quite a number of years. His family wanted to go to Tirupati, and he had agreed to take them. In all earnestness, he stopped drinking 2/3 days prior to the trip. On the day of travel, Satish and his family boarded the train as planned.

At one of the stations, Satish got down to fill water in his bottle. As he was filling, he sighted an arrack shop just outside the platform. He was tempted. He knew that the train would stop there for a few minutes, and there would be time for him to have one drink. He thought, "Let me have only one drink... nothing more!".

He started with only one drink...wanted to have one more quick one. He had

another ... one more ... one more...
etc.

When he came out, it was too late; the
train had left the station long back.

Justifying his drinking:

He feels guilty and depressed. He begins to rationalise. He develops an elaborate defence system of reasons and excuses to reduce his guilt feeling. He will keep on explaining as to why he drinks a little too much, and gets a little too drunk.

Grandiose behaviour:

Another way by which an alcoholic avoids the truth about himself and his condition, is by exhibiting a grandiose behaviour which is inconsistent with his financial and professional capabilities. For example, he buys things he does not need, gives lavish gifts, pays others bills at the bar.

Mohan had been drinking excessively
for the past three years.

He had borrowed money from various people and his debts mounted up.

One day, a shop-keeper came, stood outside his house and shouted.

"You have not yet paid my dues which you promised to pay last month itself. I want the money right away ! I will come again in the evening and collect it from you. If you fail to repay, I will drag you to the police station !"

Mohan's wife felt extremely ashamed, and was terribly annoyed. Mohan told her, "Don't worry ! Today I will take a loan from my salary. We can pay him back this evening itself."

Mohan went to the office. On his way back home, he bought five packets of 'Gold Flake' cigarettes, and happily distributed them to his friends. They smoked and drank together. Mohan called for a taxi, and when he came back home, he had no money left to pay the taxi driver.

Aggression:

Believing that others are the cause for his problems, he strikes out against them with verbal abuse, sometimes even with physical abuse. Such abuses are only an expression of self-hatred directed towards someone else.

Guilt and remorse:

Now he slowly becomes aware of what he has been doing to himself and to others. He is not able to throw it off as easily as before. He feels a deep sense of personal guilt and this guilt and remorse often lead him back to the bottle. But when the alcohol is gone, his guilt remains. These feelings now become as much a part of his alcoholism, as drinking and getting drunk.

Abstaining from alcohol:

He attempts to quit on his own - to give up alcohol - not for ever, but for a definite period of time. He feels this will 'prove' that he can give up drinking whenever he wants to. He may stay away from alcohol for a period of time he has set - a week, a month, or whatever - but then his compulsion for alcohol may make him either shorten the period of time he has set for himself, or he may be able to abstain for the set-period; in either case, after this stretch, he will inevitably go back to obsessive drinking.

Changing the drinking pattern:

After trying to abstain, he now takes another precaution. He changes his drinking pattern to show that he can start drinking again without experiencing the same old problems. He changes drinks - from whisky to beer, or shifts places and time of drinking. But no matter how many changes he makes, if it is alcohol he is drinking, he will soon be immersed in the same problems which haunted him before.

Decaying of social relationship:

As he continues to drink, he becomes aggressive, gets drunk. This is the time his friends start moving away. He may start establishing new friendships, where people are in tune with his drinking pattern. When he comes out of his problem of addiction, it is a painful discovery to realise that his 'so called friends' were nothing more than 'mere drinking friends'.

Problems on the job:

Until now, his job may not have been affected. But he can no longer hide his hangover, his absenteeism and low quality of work. Everyone becomes aware that he is drinking too much. He is now being watched. He receives memos, suspension orders or is being fined. He may even lose his job.

Family problems:

Now he is unable to keep the family together in peace. The major problems begin to weigh heavily on his wife and children. They suffer due to unmanageable problems.

Morning drink:

Physical dependence is very apparent. The morning drink takes care of the hangover, the jitters, guilt, remorse and depression. He needs it to start the day. This initiates the cycle of continuous drinking and speeds up the progression of alcoholism.

Seeks help:

Problems with the family and on the job mount up. These motivate him to seek help. But even now, he will not seek help for his alcoholism. He wants help only to put the rest of his life back in order.

CHRONIC PHASE SYMPTOMS:

Now he is getting close to the bottom. Other alcoholic complications like gastritis, liver dysfunction and polyneuritis occur.

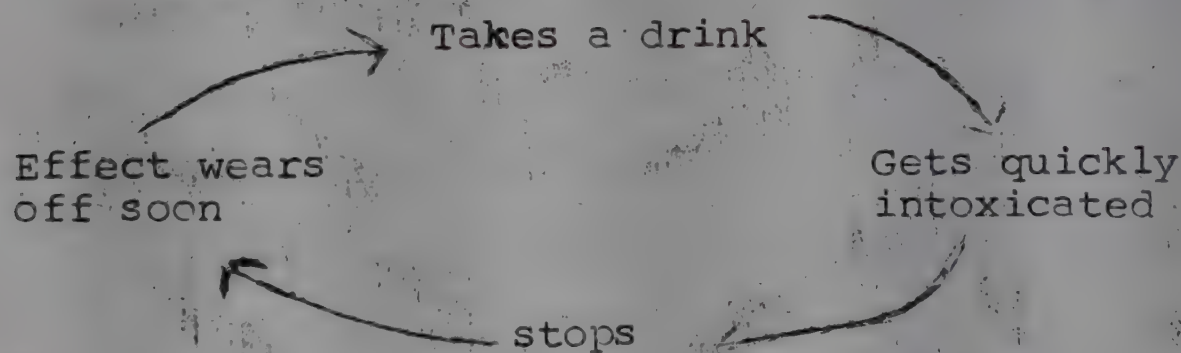
There is total break-down in his relationship with the family. He suffers from considerable confusion and mental deterioration.

Binge drinking:

Now the alcoholic has absolutely lost control and goes on drinking continuously for several days (binge). He is utterly helpless. There is total disregard for the family, job, everything. At the end of such a 'binge', he is left in a shaking, frightened, guilt-ridden condition. He promises never to drink again. But it happens again and again.

Decreased tolerance:

Due to severe physical deterioration, the alcoholic gets 'drunk' even with very small quantities of alcohol. Drinking smaller amounts results in a higher degree of blood alcohol concentration than in the past.



Ethical breakdown:

The alcoholic is so very dependent on alcohol that he will lie, borrow or even steal in order to maintain his supply of alcohol.

John, 42 years old, married, with two children. He had been drinking excessively for a few years, as a result of which he was facing a financial crisis.

He was totally broken.

He had no money to pay his children's school fees.

Many of his bills were unpaid.

Inspite of his financial problems, he could not stop drinking. He desperately needed money to buy alcohol.

He went to the church on that day. The plate for collecting mass-offering came. Without any hesitation, he put a fifty paise coin in the plate, and took away a five rupee note.

He immediately went to the arrack shop and spent this money to buy alcohol.

Paranoia:

At this stage, the alcoholic is suspicious that everyone is watching him, talking about him or even plotting against

him. He is a victim of circumstances, over which he has no control.

He becomes jealous of everyone - of friends, of neighbours, even of his own family. With a male alcoholic, there is loss of sexual desire/functioning at this stage. This results in his becoming suspicious that his wife is having affairs with other men. This is an outgrowth of his inability to perform as a marital partner.

Indefinable fear:

He is haunted by nameless fears. Now he is afraid even to cross a road, enter a dark room, etc - frightened of all kinds of things which in no way are related to reality.

Hallucinosi s:

Auditory (imagining voices speaking), visual (seeing non-existent things) and tactile (feeling as though something is moving on the skin) hallucinations are experienced.

Bajan Singh had been drinking for nearly 30 years. His family and friends had been requesting him to either stop or reduce his alcohol consumption. He did neither of the two.

One night, Bajan Singh was behaving in a very strange manner.

He said that he saw Rajiv and Sonia Gandhi entering his house. He ran, woke up his wife and asked her to prepare tea for the eminent visitors.

He could hear several people shouting, "Long live Sonia Gandhi ! Long live Rajiv Gandhi !" To him, these voices were clear and distinct. He started repeating the slogans and asked his wife also to join in.

His wife got terribly scared. She felt he was mad. She did not know that he was experiencing visual and auditory hallucinations.

Psychomotor inhibitions:

At this point, he loses most of his motor co-ordination. He is unable to tie his shoes, or button his shirts, until he 'steadies' himself with a few drinks. His legs and arms do not respond automatically. He experiences shakes and tremors. This is not the first time he is experiencing

tremors. But formerly he could control them by taking 'more alcohol'. Now the 'shakes' are more pronounced, and alcohol does not help in 'quietening them'.

Turning to God:

He becomes desperate. He is unable to face the reality of the situation and turns to God for help. Even now, he does not ask God to remove his desire for alcohol. He pleads to God to help him to maintain supply so that he can manage his drinking. His entire being is nearly destroyed by addiction at this stage.

Finally, the inevitable vicious circle begins. He gets sick, drinks to feel better, becomes ill again. Round and round he goes. He drinks just for the sake of drinking; drinks only to stay alive.

When he reaches this stage, two things may happen to him. He continues to take alcohol and becomes mentally ill.

or

He continues drinking and dies a premature, painful death.

The only solution to this problem is, he has to stop drinking totally for life.

'DENIAL' is a psychological process that takes place within the alcoholic at the unconscious level. During this process the alcoholic's mind recreates an illusion so convincingly that he believes it to be the 'reality'. He does not have conscious knowledge that this change in thinking is taking place. People who are close to him, will definitely be able to identify the methods of denial adopted by the alcoholic.

What exactly is 'Denial'?

The individual will not report accurately the quantity, frequency or the problems associated with his excessive alcohol consumption. The adverse behavioural consequences and the problems associated with his drinking will either be minimised, explained away, rationalised or denied completely. In short, there will be denial of reality.

For example, violent fight with the wife may be described as minor arguments, or rationalised as due to the arrogant behaviour of the wife, or simply ignored.

* Over the years, it has been established that 'Denial' is part of the disease of addiction - be it addiction to alcohol or any other drug. The name of the particular chemical abused is not important in recognising the illness, and consequently the words 'alcohol' or 'alcoholic' used in this chapter can very well be applied to any other chemical or chemical dependency. It does not make any difference as to which chemical is being talked about.

The wife, friend, relative, or even a treatment professional may perceive this 'denial' of the alcoholic, as lying, - a method deliberately adopted by the alcoholic to escape taking responsibility for his harmful actions. As a result of this, people close to him become hostile, and develop an intense hatred and dislike towards his dishonesty and irresponsibility.

This chapter is intended to help in clarifying the factors which produce and maintain the 'denial mechanism' of the alcoholic, so that everybody including the treatment professional may respond helpfully rather than reject the alcoholic.

Why do alcoholics deny their problems?

Drinking is an accepted behaviour in our society, and alcohol is projected as an essential part of 'good life'. For most people, drinking is a harmless activity, associated normally with social occasions. Unfortunately, in case of two out of the ten people who drink, alcohol-use slowly deviates from a harmless to a harmful activity. Once the person starts developing problems, he is branded as a 'drunkard', and a social stigma immediately gets attached to him.

In other words, we reinforce drinking, but stigmatise the victim of alcoholism. He is looked upon as an evil person who deserves to be punished, rather than as a sick person who needs understanding, support, and above all, professional help.

Normally, nobody wants to be categorised and stigmatised as an evil person, morally and mentally inferior to others, and subject himself to punishment, disapproval, rejection and social boycott. This is one of the factors which set the stage for denial.

Two diametrically opposite beliefs can never co-exist for a very long period in one individual.

As a person's drinking begins to lead to problems, such a conflict is created. On the one hand, alcohol has become a very important component of his life. He likes to drink because it produces a feeling of well being and helps him to forget problems. On the other hand, reality is trying to reinforce awareness in him about the problems created by alcohol in his family, occupation, social life etc.

At this point, he has only two options before him - reject drinking or reject reality. He begins to reject reality because he is unable to exercise the other option however hard he tries.

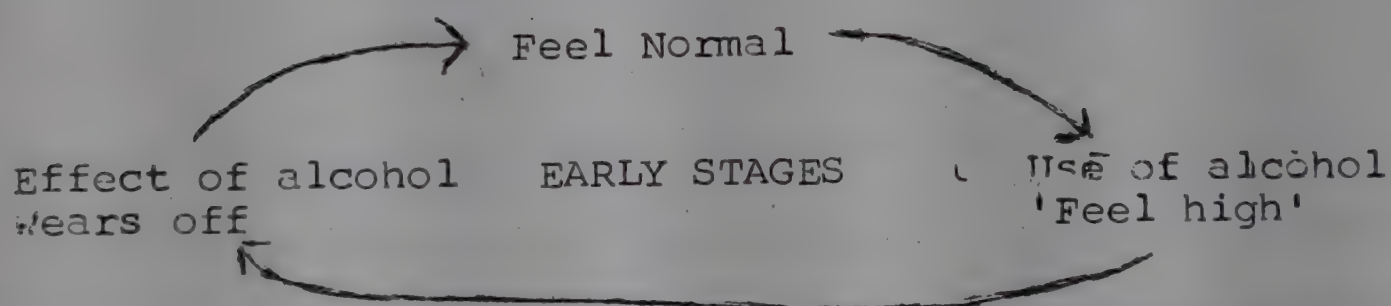
As the disease of alcoholism progresses and becomes worse, giving up drinking becomes increasingly difficult. Realities of life appear more and more bitter and consequently the mechanism of denial also becomes fully reinforced.

- The moral stigma associated with alcoholism provides the ground for 'denial'.

- The tendency of family, co-workers and friends to cover up the consequences of the alcoholic's adverse behaviour provides the social environment which promotes and encourage 'denial'.
- The individual's normal tendency to avoid internal conflict encourages denial of unpleasant reality.

Early use of alcohol generally changes the individual's mood in a positive way. Most people start using mood altering chemicals in a social setting with friends, to help them 'loosen up'.

PATTERN OF MOOD SWING



The alcoholic learns that the use of alcohol makes him feel better. To him it is a compulsion, not an option. For a few hours, it makes him forget his problems, reduces his fears and tension; removes his feelings of loneliness and gives him an impression that he is able to solve all the problems.

Gradually, there appears a difference in the emotional effect of using alcohol for the person who begins to become dependent on it.

In the initial stages of alcoholism, the alcoholic drinks much more than others; he doesn't sip drinks; he gulps fast; conceals the amount he drinks. He drinks more than others; more often than others; and above all, it means far more to him than to others.

For him, drinking is no longer a matter of choice; no more a display of his strength; it is the first sign of his alcoholism. Repeated 'denial' by hiding the bottle and drinking alone shows how inevitable alcohol has become for him to lead his life. He starts with one drink and goes on and on; he is unable to stop.

Everyone and everything which were hitherto important in his life become secondary, and the alcoholic begins to reject everything which he feels may threaten his continued use of alcohol.

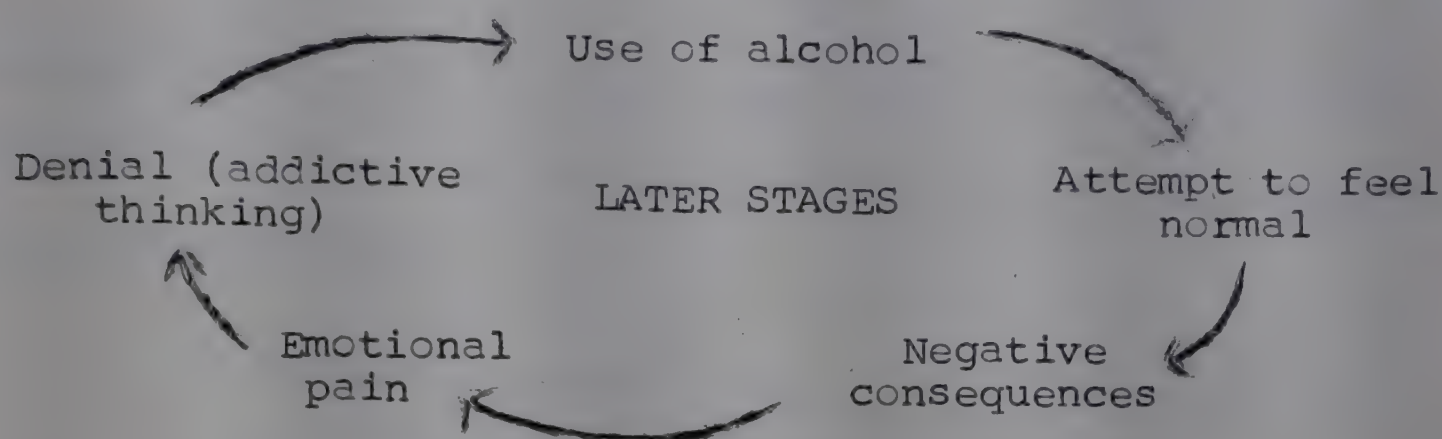
The reason why the alcoholic is unable to perceive what is happening to him is understandable. As this condition develops, his self image starts deteriorating. For many reasons, he is unable to keep track of his own behaviour and he is losing contact with his emotional self. His defence systems

continue to grow, so that he can survive in the face of his problems. The greater the pain he suffers, the higher and more rigid the defences become; and this whole process takes place without his conscious knowledge. Finally, he becomes a victim of his own defence mechanism.

His rational defence activity turns into real mental mismanagement. This serves to erect a secure wall around the increasingly negative feelings he has about himself. The end result is that he is separated from those feelings and becomes largely unaware that such destructive emotions exist within him. Not only is he unaware of his highly developed defence system, he is also unaware of the powerful feelings of self hatred buried behind it, sealed off from conscious knowledge, but explosively active. Because of this, his judgement is progressively impaired.

In short, instead of returning to 'feel normal' after the 'high' wears off, the person experiences negative consequences due to excessive use of alcohol. (embarrassment arising out of actions done under intoxication such as aggression, drunken driving, black outs etc). The problem gets compounded by the fact that these defences, by locking in the negative feeling, have now created a mass of free-floating anxiety, guilt, shame and remorse which become chronic in the course of time.

The person is no longer able to start any given drinking episode from the 'normal point', where before his illness he could always do, and then proceed to 'feel good'. Now he starts from a depressed or painful emotional state and drinks to feel normal. In the final stage of alcoholism he has no option but to drink in an attempt to feel normal.



Because there is an absolute dependence on alcohol, it is impossible for him to fully realise that there is a tie between his negative feelings or behaviour and alcohol.

'Denial' or addictive thinking pattern begins to develop to protect the alcoholic from the reality of his alcoholism. As already stated, it is a defence mechanism used to protect himself from the guilt, shame and blame which usually accompany the consequences of his continued excessive use of alcohol. As he becomes more and more dependent on alcohol, 'denial mechanism' takes various shapes.

Let us discuss some of the most common forms of denial.

Simple denial:

Initially, the alcoholic totally denies the existence of any problem associated with his use of alcohol, even though these problems are quite obvious to others.

For example, the alcoholic may admit that he takes alcohol, but denies the fact that his alcohol intake has produced any adverse consequences.

"Drinking produces no problems whatever.

As a matter of fact, I feel 'good' and I am able to solve my problems better after drinking."

Minimising:

He accepts that his drinking leads to some problems; but keeps on repeating that these problems are not as much or as many as the others make it out to be. He tries to convince that it is much less serious than what it actually is.

"I drink alright...it is not all that bad... I drink only on weekends. I give enough money to my wife to run the family. I am not spending excessively

on my drinks, as she complains. It certainly does not cause any financial problem as it is made to appear."

Blaming or projecting:

The alcoholic blames others for his own shortcomings. In this case, he denies responsibility for many of his alcohol - related problems and shifts the responsibility to some one else.

It is only the cause of the behaviour which is denied and not the behaviour itself.

"My wife does not respect me. I slog only for her and for my children. But she shows absolutely no understanding of my problems. She is constantly at my back. She does not bother about my feelings at all. I drink only to forget my misfortune."

Rationalising or giving excuses:

The alcoholic gives innumerable excuses, justifications and alibis for his behaviour; but never admits that the real cause for his adverse behaviour is his inappropriate use of alcohol.

"My boss keeps on saying that I have not completed my assignment on time. This is because he is totally prejudiced against me and never cooperate whenever I ask for help! I drink only to calm my nerves !"

The alcoholic never accepts that alcohol is the real reason for his bad performance.

Intellectualisation or explaining away feelings:

Here the person avoids facing alcohol-related problems by dealing with them on a superficially general, theoretical or intellectual level.

"I am a doctor and I know what it means to be an alcoholic. How can you ever come to the conclusion that I drink excessively and damage my liver or brain? Do you really think that I am as stupid as all that?."

Anyway, I will not get angry with you, because it does not do any good anyway !"

Diverting:

The alcoholic changes the subject of conversation whenever any topic pertaining to alcohol use or alcohol related problems crop in.

The alcoholic's friend says,

"You are developing severe problems due to excessive drinking. It is high time that you take care of your health, see a doctor and go for treatment."

The alcoholic does not allow his friend even to finish the sentence. He immediately interrupts and diverts saying,

"I heard you have not yet booked your ticket to Bombay. Nowadays bookings are becoming difficult. You have to book sufficiently in advance. The booking clerk is my friend and I will certainly help you in booking your ticket."

Hostility:

Another form of denial which the alcoholic may use to his advantage is anger and irritability.

For instance, he may get extremely angry and aggressive whenever the topic of addiction is approached because he has



learnt by his experience that his anger will make the other person avoid that topic or quit that place.

Silence:

Here the addict maintains strict silence whatever be the provocation. He uses this method to withdraw from reality.

The 'Denial Mechanism' in its various forms is always supported by people around the alcoholic. Alcoholism rarely appears in one person set apart from others. It seldom continues in isolation from others. Therefore, to understand alcoholism and 'denial', we must look not merely at the alcoholic but also at others closely related to him. For the alcoholic to maintain his 'denial', others contribute unknowingly.

If excessive drinking continues for a long time, it inevitably leads to a crisis, where the alcoholic gets into troubles and will end up in a mess, if only others are not there to support him. This can happen to each individual in a different way. But the pattern always remains the same.

Alcohol which at first gave him a sense of success and independence has now exposed him, and made him a helpless, totally dependent child. Now, everything is taken care of by others.

He behaves as if he is independent while he is totally dependent on others; and drinking makes it very easy for him to

convince himself that this is true. The adverse consequences of his drinking always make him more and more dependent on others. When he gets into a crisis, he waits for somebody to take up the responsibility and cover up the consequences; thereafter he ignores the crisis and walks away from it.

Such people who protect him may be categorised as the Enablers, the victims, and the Compensators. The behaviour of these three types of people is called 'Enabling Behaviour'.

"Enabling" is a therapeutic term which denotes a destructive form of helping. Any act that helps the alcoholic to continue drinking without suffering the consequences of his inappropriate use of alcohol, is considered "Enabling Behaviour".

The Enabler

The Enabler is a person who may be impelled by his own anxiety and guilt to rescue the alcoholic from his problems. He wants to save the alcoholic from the immediate crisis, and relieve him of the tension created by the situation. To the enabler it is like saving a drowning man. This rescue mission conveys to the alcoholic what the person really thinks, "You cannot face your problems without me."

In reality, the 'Enabler' is meeting a need of his own, rather than that of the alcoholic although he does not realise it himself. The enabler actually reveals lack of faith in the

alcoholic's ability to take care of himself, which is a form of judgemental condemnation.

This role is normally played by the 'doctors', or 'social workers' who lack scientific information about alcohol or alcoholism which is essential in helping alcoholics out of their problems.

The behaviour of these people conditions the alcoholic to believe that there will always be a protector, who will come to his rescue, even though these enablers insist they will never again rescue him. They have always rescued him and the alcoholic knows that they always will. Such rescue operations are as compulsive to them as drinking is to the alcoholic.

Victim

The victim is usually the boss, the employer, the supervisor or a co-worker. When the alcoholic fails to perform his job, the 'victim' normally completes the work. If the alcoholic is absent due to his drinking or due to a hangover, the 'victim' gets the work done for him.

Statistics in industries show that by the time drinking interferes with a man's job, he may have been working for the same company for quite a number of years, and his supervisor or boss, by now would have become his real friend. Protection of a friend is a perfectly normal response.

The victim always hopes that this will be the last time that he will be rendering this sort of a help. But he continues to protect the alcoholic again and again.

The alcoholic becomes completely dependent on this repeated protection and cover - up by the victim. Otherwise he will not be able to continue drinking in this manner.

In short, it is this 'victim' who unknowingly helps the alcoholic to continue with irresponsible drinking without losing his job.

The compensator

The key person is normally the wife or parents of the alcoholic, or the person with whom the alcoholic lives. This person has played this role of the 'compensator' much longer than anybody else.

The wife is hurt and terribly upset by his repeated drinking episode. She has to take up the responsibility to hold the family together inspite of all the problems created by drinking. She becomes bitter, resentful, afraid, and deeply hurt. She controls, sacrifices, adjusts, but never gives up. The alcoholic blames her for everything that goes wrong in the house, or outside.

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In helping the alcoholic, she also unconsciously meets a need of her own. She enjoys her inevitability arising out of the alcoholic's total dependence on her.

She is also forced to play the role of a responsible and accomodating housewife, who can function efficiently inspite of the problems surrounding the entire family. She is afraid that society will otherwise brand her as 'non-cooperative', unaccomodating and inefficient'.

She tries whatever is possible to make her marriage work and to prove that she is able to manage the problems efficiently. She plays all the roles - the role of a wife, the role of a father, the role of an earning member and so on.

When an alcoholic gets into trouble her typical response is to try to minimise it.

"Let us hush this up !"

"Let me inform his office that he is taking leave because there is a function at home !"

These are moments when he is drunk. These are the ways of the compensator minimising the force and the pains of each crisis as it develops. While they are trying to be helpful they are actually aiding and abetting the development of

the disease. Everytime they try to rescue an alcoholic, they are only postponing useful treatment.

Living with a man with the disease of alcoholism, she tries to learn, and counsel him as well.

As a result of this, she hurts herself, adds more guilt, bitterness or hostility to the situation which in the course of time becomes unbearable.

If the alcoholic is rescued from every crisis either by the Enabler, the Victim or the Compensator, there is no chance for the alcoholic to recover at all. Long term recovery is possible only if the major block namely denial is broken.

In reality, the alcoholic is helpless; by himself will not be able to break the lock. He will recover only if the above mentioned people learn to break his dependency on them by refusing to help him get out of the crisis created by his alcoholism.

The alcoholic will feel helpless and desperate because some crisis or the other will inevitably occur due to his inappropriate use of alcohol. He will find no one ready to take up responsibility for his actions. He will find it impossible to deny the problems associated with his use of alcohol and it is the crisis that will force him to come for help in despair.

The Enablers, the Victims and the Compensators, too, must seek information, insight and understanding if they plan to change their roles, so that the alcoholic's denial is broken and he realises the need for help.

They should realise that,

- Crises are 'opportunities - they need not be terrifying'.
- The problem is to get people knowledgeable enough to use them creatively, i.e., out of crises, develop opportunities for intervention.
- The resulting confrontation following a crisis can break through denial and this will be the first step towards recovery; perhaps the beginning of treatment.
- The task of treatment is to make the alcoholic well. But, it is the task of intervention to bring him to treatment.

What is 'Dry-Drunk'?

'Dry Drunk' is a term that describes the state of an alcoholic who is not at all comfortable when he is not drinking. During the drinking period, the alcoholic displays certain deviations in his attitude and behaviour. If these traits persist even after he gives up drinking, he is called a 'Dry Drunk' person.

'Dry' refers to the fact that he is abstaining from drinking; 'Drunk' signifies display of the same deviations in attitude and behaviour, as were exhibited during the drinking period. In other words, there is no improvement in the quality of his life. To put it plainly, there is intoxication without alcohol.

Alcoholism as an illness, consumes the sufferer both physically and emotionally. So does 'Dry Drunk'.

Many, including the alcoholic, believe that when the drinking is stopped, a state of normalcy will automatically return. This is not true. The state of normalcy will return only if he stays away from alcohol and at the same time, takes efforts to make

* All mood altering drugs have one effect - they change the mood and the feelings of the user. Problems faced during recovery are similar in the case of all chemically dependent people. The term 'Dry Drunk' which is applied to alcoholism is true of all other mood changing chemicals also. Even though we repeatedly use the words 'alcohol' and 'alcoholism' in this chapter, they can well be substituted by any 'addictive chemical' or 'chemical dependency'.

changes in his thinking and behaviour which will in turn make him a balanced person.

'Dry Drunk' is an important term which has to be understood by the alcoholic, because during recovery he is likely to experience certain problems associated with the 'dry-drunk' syndrome.

A 'Dry Drunk' person is only half way across a stream. With extra efforts, he can cross the stream; without that, he will start sinking, i.e., he will go back to drinking. This may happen again and again. But there is always hope - a hope not based on simple wishful thinking; but based on authentic experience of people who have successfully swum across such rough currents in the stream.

'Sober living' implies leading a good qualitative life without alcohol. That is, making re-adjustments with a view to go back to a good pattern of life similar to the one, possibly experienced well before the problem of drinking arose. This is an assignment which has to be planned and executed. Creating new patterns in life, requires patience. However, IT CAN BE ACHIEVED.

Let us analyse the several warning signs of relapse. An understanding of these will help in early detection and relapse prevention.

1. Fear about well being:

Alcoholics during their initial stages of recovery, report extreme fear and anxiety. There is lack of confidence about facing life without alcohol. It is like giving up a long trusted friend.

This apprehension is short lived and will go away with time.

2. Denial:

The alcoholic makes an outright denial of the truth about himself. He does not accept the need for a change in his life style.

A fearless moral inventory as described in the fourth step of AA alone, will be able to help him to break his denial.

3. Over confidence:

The alcoholic convinces himself that he will never drink again. He makes 'tall promises'. He does not follow the daily programme.

A structured practical daily programme will help him to remain sober.

4. Attempts to impose sobriety on others:

He tries to educate others and attempts to impose sobriety on others. He begins to focus more and more on what others are doing than on what he himself should do.

He will be able to remain sober if he concentrates on identifying his own shortcomings and adopt appropriate methods to change them.

5. Defensiveness:

There is a noticeable increase in his defensiveness when talking about his problems. He finds many reasons for avoiding AA and his arguments reveal an attempt to ignore the truth that he needs AA or other help.

This pattern has to be definitely interrupted, because continued sobriety inevitably calls for support and help from others.

6. Compulsive behaviour:

Behaviour patterns become very rigid. When they are in the company of others, they either try to monopolise the conversation or remain silent. An attempt to over work also begins to appear. Some compulsive behaviour patterns like gambling, card games, horse racing & taking other mood changing drugs are the other indicators.

This compulsive behaviour may be directed in a positive pattern. For example, they may be encouraged to go to places of worship, relax with family members or attend AA meetings regularly.

7. Impulsive behaviour:

Without proper and adequate thinking, he makes major decisions. These impulsive actions lead to extreme stress situations.

A method to overcome this is to postpone taking action on the decision made. Re-thinking will definitely help him to make proper changes in his decision.

8. Loneliness leading to depression:

Patients report episodes of intense loneliness. If at all there is involvement with other people, it will be either a compulsive or an impulsive involvement. They feel extremely depressed at this point of time. Normally, the family members or friends try to 'humour them' out of this depression.

These attempts by the family members or friends will not work. Possibly he may be required to take anti-depressants.

9. Tunnel vision:

The alcoholic looks at life not as a whole, but in isolated compartments. Too much concentration is given to one area of life which leads to total neglect of other areas.

For example, everyday the person goes to the office early in the morning, and keeps on working till late in the night. He

comes home very late, does not communicate with his wife or children, and immediately goes to sleep. This is repeatedly done. In other words, he attaches undue importance to his official life, and overworks when it is not necessary at all. This leads to the total neglect of his family, friends, and the other areas of his life.

Instead of applying oneself to only one area, he should create a suitable plan of action. Spending time with the family and playing with children will enrich family relationship. Activities like reading, gardening, visiting relatives and friends, physical exercises may help him to manage life better.

10. Irregular habits:

Irregular eating and sleeping habits are commonly noticed. They either over-sleep or are unable to sleep for several days.

A structured plan which includes good eating habits, and relaxation alone can help. Good health and enough rest are very important. Any person who feels good, is more apt to think well.

11. Lack of constructive planning:

Wishful thinking begins to replace realistic planning. They pay no attention to detailed structuring. They may be described as day dreaming.

This may be overcome if the patient is helped to become aware of his own personal shortcomings and make a realistic plan which can be implemented.

12. Impatience:

The thought that 'I have tried my best and nothing is working out' begins to develop. For them, things are not happening fast enough, or others are not doing what they should do.

A positive method to overcome this is to help him realise the shortcomings imposed by alcoholism and assist him in making a 24 hour plan so that he does not expect the impossible to happen.

13. Periods of confusion:

The episodes of confusion increase in frequency, duration and severity.

For example, decision making becomes impossible. There is repetitive thought pattern, and lack of proper judgement.

The recovering alcoholic may be assured that these are parts of the disease and do occur. Sharing and being aware of the fact that these will disappear in course of time, will help them proceed towards sobriety.

14. Irritation and anger:

The alcoholic gets angry and frustrated and shows resentment towards others. He may accuse others of being highly critical. This is the result of his own attitude towards himself. This in turn increases his own stress and anxiety.

15. Progressive loss of daily structure:

All the daily routines become haphazard. Regular hours of getting up or going to bed disappear. Eating is not done at the appropriate time. They are unable to keep appointments. They become confused and there is lot of idle time. This also leads to tension, frustration and fear.

As stated before, a realistic action plan of daily activities is the only solution to the problem.

16. Irregular attendance at AA meetings:

Rationalisation patterns develop to justify this action. Treatment and recovery have lost their priority.

This is an extremely dangerous warning sign. Regular follow-up at the treatment centre and attendance at AA meetings are very vital towards recovery. These cannot be substituted at all.

17. Frustration:

This is the outcome of a feeling of helplessness and extremely poor self image. The patient does not accept help from others. Normally he achieves this by being aggressive, or through quiet withdrawal. Thought processes, judgement and thinking abilities are impaired. He feels absolutely helpless and powerless.

These conditions are normal during the period of recovery and will disappear in course of time.

18. Self-pity:

"Why do these things happen to me? Why am I alone an alcoholic? Nobody appreciates what I am doing !" These are the normal ways in which a patient thinks.

Sharing with AA members and counsellors may help them to realise and get assured that they can also lead a qualitative life.

19. Thoughts of social drinking:

At this point of time the patient feels that his problems can be overcome by drinking. He starts feeling that he can drink in a controlled manner.

He starts experimenting controlled drinking; but very soon returns to obsessive drinking and develops all sorts of alcohol-related problems.

With hind sight, the patient realises that there are many other alternatives to drinking. If he starts drinking, he will not be able to stop and will definitely get back to compulsive and excessive drinking, and to the associated problems as well.

A new approach to relapse treatment can be formulated by having these warning signs in mind.

These include:

- * Educating the patient about the presence of warning signs
- * Teaching the patient and his well wishers as to how they can identify the warning signs
- * Reassuring the patient about the supportive assistance available, which will help in prevention of a relapse. This in turn will lead to his enjoying a qualitative life.

VII - GUIDELINES FOR FAMILY MEMBERS

Does the disease of addiction affect only the addict? Or does it affect his family as well?

Addiction does affect the family with the same intensity with which it affects the addict.

As addiction gets worse day by day, the family is compelled to face several unmanageable problems. Unable to cope with these problems, the family constantly lives under severe tension and pressure.

This results in the family members becoming desperate, angry, frustrated, nervous, afraid and guilty. In many respects they start behaving just like the addict, even though they do not take drugs.

The family members adopt certain rules which they think will help the addict give up his drug taking. But taking these roles make them helpless and also proves detrimental to the recovery of the addict.

The following are some of the roles adopted by the family members:

1. Protector:

The family members cover up or conceal the consequences of the addict's drug taking behaviour. At this stage, the

family members do not realise that the real problem is his drug taking. Their focus is only on concealing or covering up the consequences.

For example, the drug addict may not have attended classes regularly. The parents, on receiving a letter from the Principal, would meet the Principal and say that their child has been sick frequently. They would request the Principal to allow the child to write his exams.

2. Controller:

The family members may not give money, throw away the drugs, lock him up or send away his friends in order to prevent the addict from taking drugs.

But, none of these methods work.

3. Blammer:

Now, the family members are totally frustrated and helpless. This leads to anger, bitterness and resentment towards the addict. They start blaming the addict for each and every problem in the family.

They say, 'your father has had a heart attack because of you. If you don't stop taking drugs he will die'.

'Why don't you behave like other good boys and stop taking drugs?'

'I will commit suicide, if you continue taking drugs'.

4. Loner:

At home, tension and anger increase.

The family members want to be left alone.

They avoid even their friends and relatives.

Do any of these methods used by family members help the addict to recover?

NO, CERTAINLY NOT.

A few useful hints for the family of addicts:

- 1) Do not hide or throw away drugs. This method will not work. The addict will find some other way to acquire drugs, and you will feel let down.
- 2) Do not argue or quarrel with a person when he is on drugs. The situation will become worse if this is done.
- 3) Do not ask the addict why he is taking drugs. The addict will come out only with excuses. Accept that addiction is a disease.

- 4) Do not accept the promises of the addict. Do not extract promises from him. He will not be able to keep these up, even if he is sincere while making the promises.
- 5) Do not cover up the consequences of his drug use. It reduces the crisis for that moment, but worsens the illness. If the addict is left to face the crisis all by himself, he will seek help. For example, he may have a lot of debts and if you keep repaying he will never realise his problem.
- 6) Do not take up the responsibility of the addict like repaying his debts.
- 7) Do not lock up the addict. It will not help.
- 8) Do not justify his drug taking thereby reinforcing the addict's excuses. For example, 'if only he has been a stronger child he would not take drugs'. 'He is a very sensitive youngster'. 'His friends always teased him because he was fat'.
- 9) Do not accept the lies that are told by the addict and believe those as truths. For example, he may repeatedly ask his parents for money giving various reasons like excursion, projects etc, but will be using it for drugs. If the parents believe this as the truth, though they know that it is not so, they are going to feel hurt.

10) Do not allow the addict to take advantage of the family members' vulnerability such as asking for money when guests are around.

11) Do not attempt to punish, threaten, bribe, preach or try emotional appeal to the addict.

Punish: Locking him up in the room.

Bribe: 'I will get you a motorbike if you stop taking drugs'.

Threat: 'I will commit suicide, if you continue to take drugs'.

Emotional Appeal: 'If you love me and your father, you will not take drugs again'.

Preach: Preaching about the consequences of drug taking, does not help. He is aware of the consequences but he is unable to give it up.

12) Do not feel guilty for the addict's behaviour.

13) Do not put off facing the fact that addiction is a progressive illness. To do nothing is the worst choice.

What is it that the family members can do?

- 1) Addiction is a disease. Accepting this fact will help the family members to understand the addict's problem better.
- 2) Try to remain calm, unemotional and factually honest in speaking with the addict about his behaviour and its day to day consequences.
- 3) Be patient and live one day at a time. Recovery from addiction does not occur overnight.
- 4) Try to accept setbacks and relapses with calmness and understanding.
- 5) Establish and maintain a healthy atmosphere in the home and try to include the addict in the activities at home.
- 6) Encourage the addict to participate in leisure time activities.
- 7) Discuss the problem with someone who can be trusted.

To sum up:

Addiction is a disease which affects both the addict and his family.

The addict's family takes on various roles to cope with the situations - roles like protector, controller, blammer, etc

and ends up deeply affected and emotionally broken.

Preaching, punishing, bribing, threatening, asking for promise, emotional appeals, etc, will not work.

Before the disease gets worse, the addict and the family should go for treatment.

The family members of the addict need empathy, understanding and help. During treatment, they get emotional help and guidance. As a result, they are able to manage their lives better and support the addict, in his recovery.

VIII - AN OVERVIEW OF TREATMENT FACILITIES

The disease of addiction affects the 'whole' man - physically, mentally and psychologically. Therefore, therapy for the addict should also address man in his totality.

Addiction-treatment is not the responsibility of a single profession. People from various disciplines work together in the common task of treating and rehabilitating the addict. Doctors, nurses, psychologists, social workers and recovered addicts are the members of the therapeutic team, who have to work together in co-operation, to achieve the best possible results.

Let us discuss the comprehensive addiction-treatment programme which involves a multi-disciplinary approach.

There are four broadly described phases in the treatment of chemical dependency:

- Identification/ Intervention
- Detoxification
- Rehabilitation
- After-care

IDENTIFICATION/ INTERVENTION:

Addiction is indicated when the user of alcohol or drugs start facing problems in any of the areas in his life - job, family

relationship, personal finances etc. Despite the problems increasing in one or more areas, the user continues to take alcohol or drugs and is simply not able to stop.

So, identifying an addict and intervening in order to motivate him for treatment are often carried out by someone like a relative, a friend, a fellow employee, a supervisor, a doctor or the school authorities.

When the dependent person's wife or parent brings the person for treatment, it is known as family intervention. Similarly there may be medical intervention, where the physician discovers certain physical damages in the individual related to drug abuse and refers him for treatment. There can also be occupational intervention, when an employer identifies the addict through an Employee Assistance Programme or by mere observation and reports from the fellow workers of the addict. It can also happen due to the intervention of school authorities who inform the parents about the possible drug problems the student may be going through.

Relevant information including the history of chemical use from the patient and from other sources are collected.

Based on this information, chemical dependency and other related problems are diagnosed and referrals suggested.

DETOXIFICATION:

Detoxification is the process of providing medical treatment in order to remove the toxicity of the drug from the body and ensure recovery from its effects. This phase of treatment calls for professionally supervised close monitoring and support by the medical professionals. This medical management is to ensure that the patient undergoes safe withdrawal from chemicals.

Psychological equilibrium and necessary medical care for treatment of acute and chronic medical problems associated with addiction are also given.

This help is provided by emergency care services, detox clinics, medically supported inpatient treatment centres, etc.

REHABILITATION:

It is the method of helping the drug users give up the drug to which they are habituated or upon which they are dependent.

They are also made to realise that they can be useful to and respected by their families, friends and community.

Rehabilitation provides help to the addict to get out of his dependency on drugs and make positive changes in his life style. He is helped to free himself from a course of self-

destruction to a productive and a more responsible manner of living.

Rehabilitation service is available in inpatient units, out-patient rehabilitation centres etc.

AFTER-CARE:

This includes the package of services provided to the addict after successful discharge from the programme. Brown and Ashery define "after-care" as 'those community interventions designed to permit the client's effective reintegration into society'.

After-care activities can be viewed as a first line of defence against return to drug use. The activities include self help programmes like AA, NA, specialised after care sessions etc.

Given below is a list of VARIOUS CENTRES which provide help in specialised areas of treatment:

Information, assessment and referral centres:

These centres provide information about the different kinds of treatment services available for addiction. Medical, psychological, family & chemical use history are collected from the patient and from other sources. Based on ~~this~~ information, the condition of the patient is assessed and he is referred to a specialised treatment plan.

These service organisations are located in industries, welfare agencies, schools and centres providing EAP programmes.

Detoxification Centres:

The primary function of these institutions is to provide detoxification services to patients who appear to have no other serious medical problems except the problems related to the abuse of drugs.

Detoxification centres are located in hospitals, emergency care services, etc.

The staff include physicians, nurses and counsellors. Here the patients undergo detoxification for a period of 2 to 7 days. This period varies depending on the condition of each patient.

These centres also provide counselling units which motivate them to take further treatment. Referral to appropriate treatment programme for continued care is also made.

Residential treatment centres:

Here the patient resides in the treatment centre whether it is a hospital or a therapeutic community. These treatment centres provide an intensive structured programme of treatment and rehabilitation which is highly individualised. The goals of this treatment are:

- to help the addict give up drugs totally for life and
- to effect positive changes in his behaviour and attitude, so that he is able to lead a qualitative life.

The treatment methods adopted are individual counselling, group therapy, re-educative lectures, recreation therapy, therapeutic community meetings and relaxation techniques. The philosophy of AA, plays a significant role in the treatment.

~~The interaction~~ between individuals and the group is utilised to reinforce and strengthen continued abstinence. Balanced diet and supplementary nutrition are provided as part of this therapy. Patients are involved in therapeutic activities like cleaning the room, helping in the kitchen, watering the plants etc. in the treatment centres.

Certified counsellors, specialised in the treatment of addiction and recovered addicts, play a major role in providing counselling services.

These recovered addicts, help the patients to the maximum **extent** by combining their personal experience of recovery with specific training. The role of the psychiatrist is minimal.

Out-patient programme:

This is designed for the ambulatory patient to receive medical care from a hospital or a clinic. The primary function of the institution is to provide treatment in a non-residential setting. These patients do not require in-patient care but need specialised treatment to come out of their chemical dependency and to make adjustments to the problems that they are likely to face during abstinence. Counsellors prepare a social/psychological assessment of each patient and assign him to group counselling sessions that meet regularly - evening or night sessions for those who are employed, and day sessions for those who are unemployed. Individual counselling is also included as part of out-patient therapy programme. If the patient is found to be drinking or taking drugs while attending the programme, he is transferred to the in-patient programme.

Family programme:

Addiction is a family illness that affects not only the addict but also all the other significant people in his life. The family programme is designed to give the family members, relatives, and close friends an opportunity to understand the disease of addiction and its impact on each member of the family. The family programme is for a duration of 5 days. Participants attend lectures, group discussions, individual

counselling and Al-Anon programmes. This programme runs parallel to the treatment given to addict. Families whose addicted members have refused to take treatment can also attend these programmes. The programme helps the family and friends examine self-defeating behaviour patterns, become aware of treatment and post treatment experiences and the need for making improvement in their life. This programme helps them in their personal growth.

Programme for the children of alcoholics:

Children of alcoholic patients often experience physical abuse and emotional neglect. They have a high risk of developing all sorts of alcohol-related problems.

Many therapeutic programmes have been formulated to help children of alcoholics. These programmes are for a duration of 4 - 5 days.

Programme for people with special need:

Special treatment programme for adolescents and elderly women, have also been developed by many institutions.

After-care sessions:

After-care is provided to patients who have progressed sufficiently through the in-patient services. They would have reached

a point in their recovery, where they will benefit from a plan of continued scheduled contracts. This will support and increase the gains made in the treatment programme.

Since chemical dependency is a chronic, relapse-prone disease, treatment must also be of an extensive nature. Extensive treatment is beneficial and help is given to prevent relapse and to support the individual and his family through major changes in the life-style which take place during recovery. The focus is on personal re-entry into the community and immediate problems associated with abstinence and recovery.

Individual counselling and group counselling are the services available.

Half-way programme:

This is a programme that attempts to combine the advantages of the residential treatment with those of the ambulatory treatment. Problems are solved through group interactions and community involvement. Patients live in a group, but are permitted to leave the premises during the day and on week ends.

The primary function of the institution is to provide support and guidance on a residential basis in order to proceed towards the goal of independent living. These addicts require

limited medical supervision but are in need of continued help to tackle their alcohol/drug related problems. These centres provide supportive help in the form of occupational, social and recreational activities.

Patients who do not have family or who are unmarried or divorced are recommended to this programme.

IX - BASIC COUNSELLING TECHNIQUES

Counselling is a scientific process of assistance extended by an expert in an individual or group situation to a needy person(s). The process aims at enabling the individual to learn and pursue more realistic and satisfying solutions to his difficulties.

The process revolves primarily on the relationship between the counsellor and the client that leads to growth and change.

The individual is helped to understand all the information that has been accumulated about himself in the context of his world and to develop the ability to take wise, discrete, independent and responsible decisions.

DIFFERENCE BETWEEN COUNSELLING/GUIDANCE/ADVICE/PSYCHOTHERAPY

PSYCHOTHERAPY	ADVICE	GUIDANCE	COUNSELLING
is individual oriented and focusses mainly on early childhood experiences and trauma	involves an experienced mature adult talking to an in-experienced person in a subjective tone	is a comprehensive process which enlightens individuals regarding a new place, subject or situation	is a specialised function, problem oriented and helps the individual understand himself and develop the ability to take decisions and make choices.

Specific features of counselling :

Counselling is a series of activities performed in relation to and individual/group and his/their needs.

These activities are systematically planned and are inter-related.

These activities are carried over a period of time, the length of which is dependent upon the needs of the client. Counselling sessions are usually held every alternate day initially and once a week/less frequently in the later stages. Each session lasts for 30 to 60 minutes.

Basic principles in counselling

Respect:

The ability of a counsellor lies in communicating to the client the belief that every person possesses the inherent strength and capacity to 'make it' in life, and that each person has the right to choose his own alternatives and make his own decisions.

Authenticity:

The counsellor should learn to be genuine, real and honest and not have a 'holier-than-thou' attitude, or communicate to the

client "I'm above you". In other words, the therapist should be himself, and his words and behaviour should match his inner feelings.

Non-possessive warmth:

Non-possessive warmth is the demonstration of concern, interest and value for the other; a deep concern for the well being of the other person.

Non-judgemental:

Counsellor should avoid making assumptions of judgements about the client. This means letting the client be the final judge of his own feelings and experiences. The counsellor should not be biased.

Accurate understanding of the client:

Accurate understanding of clients is the precise evaluation of the perceptual and cognitive behaviours of the individual.

Recognising the client's potential:

It is important to recognise the strength and abilities of the client, rather than his performance.

Confidentiality:

To maintain confidentiality and to develop trust is most important in the counselling relationship. Therapist should not reveal to other people the client's identity, personal details and other information without his permission. In addition, the therapist must assure the client that secrecy would be maintained.

METHODS/TECHNIQUES/SKILLS

The Process of Counselling .

Stages in counselling :

The different stages in counselling are briefly stated below:

1. Making contact in a caring professional role leading to an appointment for counselling
2. Building rapport
3. Finding out the purpose of the visit
4. Tentative evaluation on the nature of the problem and approaches in dealing with it
5. Leading to a contract which calls for commitment on the part of the patient

6. Process of counselling

7. Feedback and / or follow-up with one or more sessions as per need

8. Termination and/or referral.

Skills/techniques of counselling:

Skills of a counsellor are crucial in the counselling process, and must be adequately developed.

The main vehicle through which counselling takes place is communication. Therefore, developing communication skills is very important to the counsellor.

The three elements that comprise communication between two individuals are:

- listening
- processing
- feed back

Feedback skills can be broken down into the following:

Paraphrasing: A counsellor's statement that mirrors the client's statement in exact or similar wording.

Client: My boss doesn't understand me at all. He doesn't realise I am always shaky in the morning.

Counsellor: Mornings are a tough time for you.

Reflection of feelings: The essence of the client's feelings, either stated or implied, as expressed by the counsellor.

Client: I didn't want to come here.
There is nothing wrong with me.
I only came to see you because my wife insisted.

Counsellor: You do not seem too happy about coming here

OR

I get the impression you are annoyed.

Summarising:

A brief review of the main points discussed in the session to ensure continuity in a focused direction. This should be done at the beginning and at the end of each session. In the beginning the client is asked to summarize the previous session, and at the end, the counsellor summarizes the main points of the current session.

Researchers in this field have broadly outlined, skills specific to the different processes in counselling, but these may overlap and can be used in other processes also.

Skills for data collection - All interviewing skills,
psychological tests.

Skills for identification - Probing, interpreting, confrontation
and understanding of problem

Skills for problem solving - Processing skills, interpreting, counsellor's self-disclosure.

Some of the communication skills have already been discussed. The others mentioned above will be briefly discussed now.

Psychological tests: Psychological tests are standardized tools to obtain a more scientific assessment of an indivi-

dual's psychological characteristics such as intelligence, aptitude, interests, personality etc.

The counsellor should be familiar with the diagnostic and personality tests, used in the field of chemical dependence. The interpretation of the test scores should be carefully done to the patient.

Probing:

A counsellor's response that directs the ~~client's~~ attention inward to help both parties examine the ~~client's~~ situation in greater depth.

Client: I have been doing this job for
years now and nobody ever complained
before and now they are saying my
job performance has not been as
good.

Coun-
sellor: In what ways do they specifically
say your work has not been good?

Interpreting:

Presenting the ~~client~~ with alternative ways of looking at his situation. Used effectively, interpreting should assist the

client to realise that there is more than one way of viewing most situations and to help him apply this kind of unrestricted thinking to all aspects of his life.

Counsellor's Self-Disclosure:

The counsellor's sharing of his personal feelings, attitudes, opinions and experiences for the benefit of the client.

Client: You know, I feel so ashamed. All my friends are going to find out that I have a problem with drinking and I really don't know how I am going to face them.

Counsellor: I understand how you feel, because I can remember how ashamed I felt, at first, when I had to admit to my friends that my father was an alcoholic.

Confrontation:

A counsellor's statement or question intended to point out contradictions in the client's behaviour and statements - also used to induce the client to face an issue the counsellor feels the client is avoiding.

Other skills:

Contracting: Here, the responsibilities and goals of both the client and the counsellor should be clarified either orally or in writing. It is necessary for all clients to acknowledge what is expected of them and to articulate their own goals. A contract should also include penalties for not living upto one's part of the bargain. Penalties must be issues that are valued by clients. Contracting helps prevent a situation in which counselling 'drifts aimlessly'.

Referral: Timely, prompt and appropriate referral to other professionals & community resources, is essential in counselling. The counsellor should be aware of other services available to help the client.

Record keeping: This aspect is usually forgotten or taken for granted, but is a skill of essential value which every counsellor has to develop. Prompt recording of sessions, notes after discussion with supervisor, follow-up notes etc., are essential.

This helps the counsellor in quick reference, and it would help in situations when there is a change of counsellor.

Planning individualized treatment: Here, the counsellor should learn to differentiate, analyse, evaluate and synthesize a

multitude of stimuli, communication and pieces of information that emanate from the client, and then tailor intervention strategies.

To summarize, the following are the therapeutic responsibilities of a counsellor:

1. Establish and maintain a climate for counselling.
2. Taking case history.
3. Prepare necessary client reports.
4. Seek consultation with other professionals whenever necessary.
5. Tailor individual treatment plans.
6. Handle crises situations.
7. Explain nature of problems.
8. Help client establish contact with community services.
9. Improve/co-ordinate other resource persons in treatment.
10. Prepare after care activities for client.
11. Evaluate client's progress & re-define goals if necessary.

PERSONAL QUALITIES OF A COUNSELLOR

The expert, apart from thorough mastery of knowledge, perfect proficiency in skills and adequate control of the competencies related to the field of work, should also possess specific qualities discussed below.

(i) A good listener: A counsellor needs to possess and inherent trait for being a good listener. A counsellor should give up fondness or 'love for one's own voice'.

((iii)) Empathy: Rogers defined empathy as 'an ability to sense the client's private world as if it were your own, but without losing the 'as if' quality.

(iii) Patience: Patience implies the ability to maintain an equanimity during delays, to remain undisturbed in the midst of obstacles, and to keep a non-complaining calmness during the development of failures.

(iv) Emotional Maturity calls for a well balanced counsellor who does not get unduly swayed.

(v) Genuineness: The ability to experience and share with the client the feelings which a counselling encounter arouses in the counsellor.

(vi) Flexibility: Effective counsellors should be able to adapt both their role and pace according to the clients' needs and capacities.

(vii) Self-disclosure: Ability and willingness to share with the client any relevant personal experience.

In the field of chemical dependency, a recovering addict who has been sober for more than 3 - 5 years with a basic certificate in counselling can become a counsellor. All the treatment centres abroad utilise such individual's counsellors. Their personal recovery from chemical dependency is very valuable in guiding other addicts.

PRINCIPLES TO FOLLOW IN ADDICTION COUNSELLING:

Apart from the basic principles of counselling discussed earlier, there are some specific ones to be followed in counselling the chemically dependent people. Since chemical dependency is a sensitive issue, strict confidentiality is essential.

- Understand who a chemically dependent person is, what chemical dependency means, its symptoms, etc.
- Recognise that chemical dependency is a family illness; hence the entire family needs help and assistance.

- Never refer to the chemically dependent person as a drunk or a dope.
- Confront the client directly with his problems of chemical dependency. Since chemical dependency is an illness, the counsellor should feel comfortable to talk to the patient about his abuse.
- The so called 'values' of chemical dependents will be different from those of others. They may even be distorted. Accept them as part of the disease.
- Approach a chemically dependent with compassion and understanding, and not with logic and argument.
- Relapses can occur during the process of recovery. It is important that the counsellor stays with him throughout this period. The client needs lot of support and understanding at this juncture.
- Help the client establish short term goals for recovery.

Processes specific for Addiction Counselling

These can be summarised as follows:

1. Adequate assessment; Gathering information related to the extent and consequences of chemical dependency. Evaluation of

current social circumstances namely occupation, family, finance etc.

2. Explaining to the client and to his immediate relatives, the role of chemicals and the relevance of 'dependency practices' and their relation to present and past difficulties. Assessment should be shared with the client and his family.

3. Explaining to the client the concept of chemical dependency as a disease, handling denial, making realistic plans, and motivating him to maintain sobriety.

4. Helping clients resolve ~~inter-personal and intra-personal~~ problems, in accordance with the assessment made initially.

5. Helping the client make sobriety plans - both short-term and long-term. Short-term goals would be to handle the immediate environment that will influence his maintenance of sobriety, and to formulate steps for relapse prevention. The long term goals would be to help the client make efforts to attain a change in his life style, personality characteristics and values, and plan after care measures and long-term follow-up.

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X - DRUG ABUSE PREVENTION AND DRUG EDUCATION

Drug Education and Drug Abuse prevention programmes help people to develop skills which promote a healthy and more positive approach to life in order to reduce their chances of drug or alcohol abuse. The programmes also attempt to reveal the relationship of drug use or abuse to physical and emotional health and economic and social functioning in our society.

Aims of drug abuse prevention:

Drug abuse prevention programs aim at:-

- affecting the environment and context of drug use and abuse. This includes such broad goals as strengthening and supporting the family and schools. It also includes more specific intermediate goals such as, influencing legislation regarding need for drug abuse prevention programme.
- strengthening the personal and social skills of individuals.
- primary prevention on the one hand and early intervention on the other. Any drug abuse prevention activity that attempts to influence individuals before patterns of drug abuse have developed is called primary prevention. Early intervention activities focus on situations in which some

- pattern of drug abuse or other dysfunctional behaviour closely associated with drug abuse have begun to develop.
- improving the various social conditions that affect the family.

Who are the target of drug abuse prevention:

- Primary target group constitute young people - between the ages of 8 and 20. Secondary target group includes adults who are involved in the education and nurturing of young people - primarily parents, teachers, counsellors and others in professions that have an impact on youth.

How to set up a prevention programme:

- a) Assessing needs : finding out exactly the problems existing in one's school or community in order to decide on programmes and strategies that might help to solve them.
- b) Starting out: The most important rule for initiating a new drug abuse prevention programme is to start small and build up slowly.
- c) Being clear: Programme initiators who want to convince people in their schools or communities, should do all their home work before making presentations that may influence potential programme supporters. Reports of first hand obser-

The first part of the report deals with the general situation of the country. It is a very interesting and informative study of the country's development. The second part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The third part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The fourth part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The fifth part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The sixth part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The seventh part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The eighth part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The ninth part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development. The tenth part of the report deals with the specific details of the country's development. It is a very detailed and thorough study of the country's development.

vation will be far more convincing to uninformed or skeptical listeners than references to the prevention literature.

d) Training: Systematic training of all participants in affective education, group processes, communication skills. Problem solving and community organising tactics are essential and without such training, attempts to organise prevention programmes should not be made.

e) Leadership: Dynamic and authoritarian leadership is contraindicated in prevention. Field-consultancy and team work is essential for growth.

f) Staffing: Both professional and volunteers constitute the staff. The prevention worker has to be somebody who can become similar with the resources in the community. The prevention worker has to be both a counsellor and a manager. There are agencies in most communities that are not being utilised to the fullest. Hence, one of the first tasks to be undertaken by the prevention worker is to see that the resources are fully utilised.

g) Funding: To acquire funds for prevention programmes is an important factor to be considered. It is desirable for the school or community to acquire non-profit and tax exemption status which would facilitate mobility of funds that can be utilised.

h) Public Relations: This starts with getting the word out that the programme exists or is about to exist. It explains what the programme does and why it does it. This message should reach 4 types of audiences:

- Audiences that may include clients.
- Audiences that may provide the programme with financial and political support.
- Audiences that may share resources and information and
- General audiences.

Cultivate contacts with media people and others who have demonstrated some real interest in the field of drug abuse, youth development, education and similar areas of social service.

i) Coalitions and net work: If drug abuse prevention is to become a lasting commitment of social policy, the organisers will have to convince legislators, policy makers and the general public that such programmes are necessary.

j) Evaluation: Evaluation is the only way that a programme can ensure itself of continued success. Three levels of evaluation could be followed.

- Process evaluation
- Outcome evaluation
- Impact evaluation

Drug Abuse prevention strategies:

1. Information:

- What kind of information - In what setting will it be presented? Who will do the presenting?

2. Affective Education:

- Values clarification
- Self-Esteem building
- Role playing
- Decision making/ problem solving.

3. Peer and cross age tutoring and counselling:

- Youth tutoring youth
- Peer counselling

4. Life career planning

5. Alternatives

6. Parenting and family communication

Warning:

Awareness and information, therefore can work both for and against the communicator. In some instances, it might be wisest not to use the mass media as a channel of information to reach drug users because of the possibility of creating even more problems.

XI - ACTIVITIES OF T.T. RANGANATHAN CLINICAL RESEARCH FOUNDATION

In India, the phenomenal rise in the number of people suffering from addiction due to the free availability of alcohol and drugs, has created the need for a specialised addiction - treatment centre. At present, medical and psychiatric treatment are available in private and government hospitals; but comprehensive treatment centres with adequate counselling and after-care facilities extending over a prolonged period, are not available elsewhere in India.

In the year 1980, T.T. Ranganathan Clinical Research Foundation was started with the sole purpose of fulfilling this need. It offers exclusive treatment and rehabilitation facilities to the people suffering from the disease of alcoholism or drug addiction.

T.T. Ranganathan Clinical Research Foundation is a secular, non-profit, voluntary welfare organisation. Its various activities are:

- Treatment and after-care
- Training and consultancy
- Education and Prevention
- Documentation and Publication
- Research

TREATMENT AND AFTER CARE:

The 55 bed T.T.K. Hospital, T.T. Ranganathan Clinical Research Foundation offers the services of a team of competent professionals, skilled in their areas of specialisation and deeply committed to the mission. A comprehensive treatment facility covering both medical and psychological help is provided by the hospital in the treatment of alcoholism and drug addiction.

The facilities at the T.T.K. Hospital include:

- detoxification centre

- emergency ward

- general wards

- special rooms

- family ward

- therapy centre

- counselling units

- family therapy centre

- recreation centre

- dining hall

OBJECTIVES:

Treatment at the T.T.K. Hospital aims at:

- * total abstinence from alcohol and drugs for life and
- * effecting positive changes in the behaviour and attitude of the individual to enhance the quality of his life.

The treatment programme has been drawn up to offer the patients, medical help and psychological support that will enable them to recover from the disease of addiction.

Family members are also educated about the various aspects of the disease and are given guidelines to improve their quality of life.

IN-PATIENT TREATMENT:

The in-patient treatment programme at the T.T.K. Hospital is a residential, multi-disciplinary therapeutic programme, conducted by a professional team of psychiatrists, physicians, psychologists, social workers, resident counsellors and nursing staff. The duration of the treatment programme is 4 to 6 weeks.

Incoming patients are directly admitted to the detoxification centre where the required medical treatment is given. Withdrawal symptoms due to sudden stoppage of drug usage,

instances of acute intoxication and chronic health problems associated with addiction are dealt with during detoxification.

When the physical condition of the patient stabilises, he is transferred to the psychological therapy wing.

The psychological therapy comprises individual counselling, re-educative lectures, group therapy, relaxation techniques, recreational activities and educative films. Individual care and attention is given to each patient.

FOLLOW-UP:

Follow-up forms an important part of the treatment at the T.T.K. Hospital and is maintained for a period of five years. Patients are asked to participate in an after-care programme held every week at the hospital. They are encouraged to meet the doctor and their counsellors once in fifteen days in the initial stages of recovery. They can seek medical advice and report their progress. After three months, monthly follow-up visits are recommended.

AA AND AL-ANON:

Patients and family members are encouraged to attend Alcoholics Anonymous (AA) and AL-ANON meetings regularly. Meetings are also held at the hospital premises.

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PROGRAMME FOR THE FAMILY:

Addiction is considered a 'Family illness' since it affects not only the addicted individual, but also his family members. The T.T.K. Hospital offers a family programme providing information about the disease of addiction and its impact on each and every member of the family.

The family is given emotional help to cope with the stress caused by the behaviour of the addict. The duration of the programme is two weeks. This programme includes lecture sessions, group discussions, assignments, relaxation techniques and Al-Anon.

PROGRAMME FOR THE CHILDREN OF ALCOHOLICS:

Children form an integral part of the family. Addiction destroys feelings of love, security and warmth which are necessary for the normal development of children. These children desperately need lot of help and understanding.

The programme for the children of alcoholics consists of story-telling, drawings, sharing their feelings etc. These are aimed at educating them about alcoholism, relapse and recovery.

SOCIAL SUPPORT PROGRAMME:

The Social Support Programme aims at exploring the possible support, the recovering patients can receive from the society,

and utilising it towards their recovery. The support persons are usually family members, (other than the spouse) co-workers or friends. Contact with the support person helps in ensuring regular follow-up and stabilizing recovery.

TRAINING AND CONSULTANCY:

T.T.R. Foundation offers training and consultancy services to various target groups covering several aspects of addiction.

These programmes are offered to doctors, nurses, psychologists, social workers, health workers, students, teachers and supervisors.

The duration of workshops or training programmes extend from one to two days, to one month.

The three aspects dealt with in these programmes are:

1. Alcohol & Drug Education
2. Identification & Intervention
3. Treatment Methodology

Under the sponsorship of Government of India training programmes are conducted for professionals from Karnataka, Andhra Pradesh Kerala, Tamil Nadu and Pondicherry.

EDUCATION & PREVENTION PROGRAMME:

Reaching out to people and educating them on the consequences and problems associated with addiction is an important aspect of prevention. The educational programme consists of exhibitions, lectures and films in English and Tamil. These programmes are targetted towards the student community, service clubs, professional groups, industrial workers, urban, slum and rural people.

T.T. Ranganathan Clinical Research Foundation has designed several posters covering the various aspects connected with addiction to alcohol, drugs and tobacco. These posters highlight aspects such as progression of addiction, health problems related to addiction, hazards of drinking and driving, etc. Electrical gadgets and clay models are also used.

DOCUMENTATION AND PUBLICATION:

The Foundation has a Documentation centre which has a collection of materials from India and other countries. The materials range from brochures, journals, articles, paper cuttings, research monographs, books etc.

The Foundation also has various publications on Drugs, Alcohol, Alcoholism and Tobacco to its credit. These are either brochures or booklets.

RESEARCH

T.T. Ranganathan Clinical Research Foundation has conducted a number of studies covering the Sociological and Psychological aspects of addiction.

These studies have been submitted to the Indian Council of Medical Research and to the Department of Science and Technology. Some of them have already been published in Journals.

